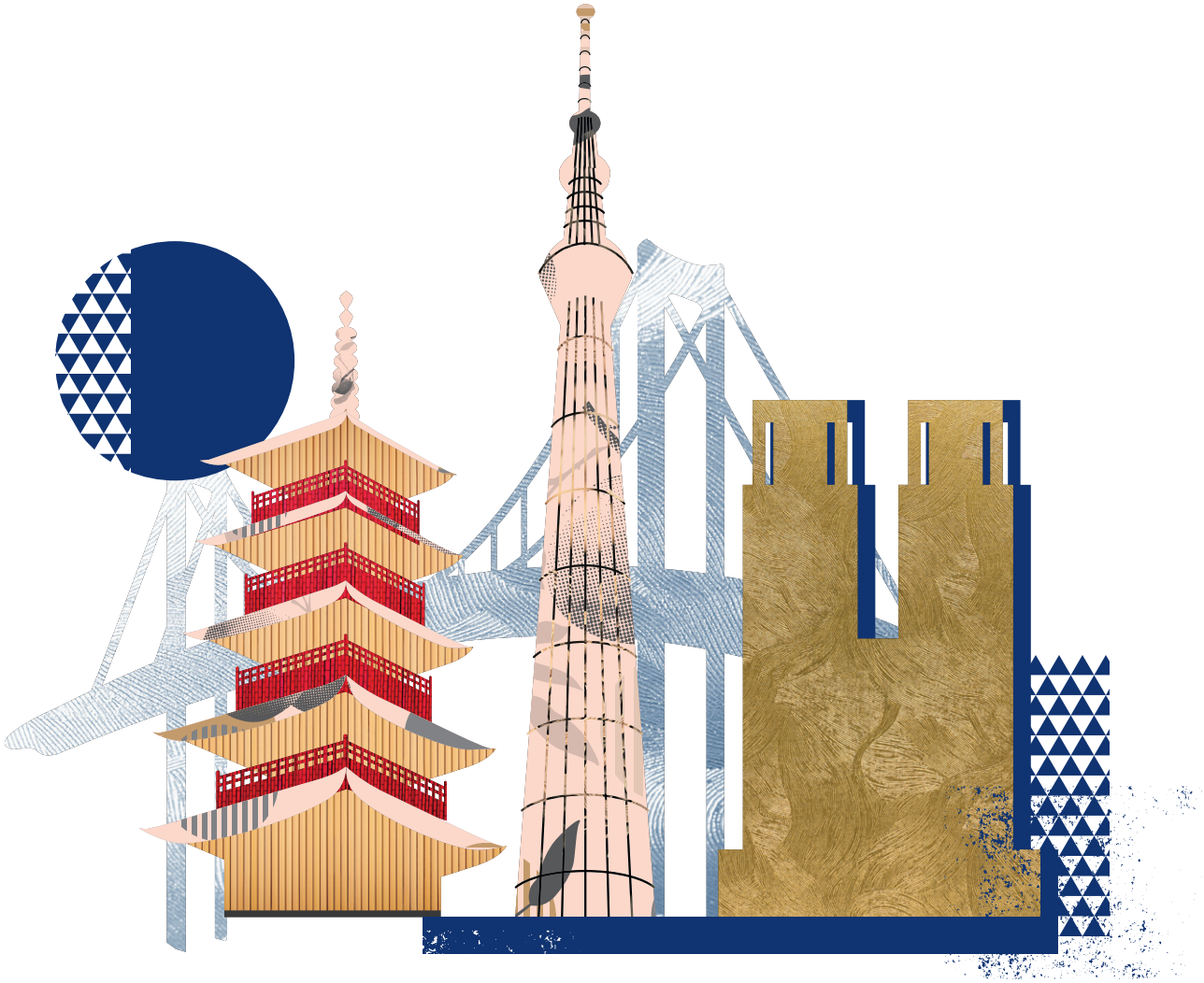
MITSUBISHI ELECTRIC

LIVING ENVIRONMENTAL SYSTEMS



Comfort & IT Cooling systems

Full product catalogue 2022-2023

VRF & HVRF Systems, Heating, Ventilation,
Control Systems, Hydronic and IT Cooling systems


MITSUBISHI
ELECTRIC
LIVING ENVIRONMENTAL SYSTEMS

Comfort e It Cooling Systems


DATA RATE 100 GBPS
LAN1 ONLINE
LAN2 ONLINE
LAN3 ONLINE
LAN4 ONLINE
MEMORY
STATUS ONLINE
BACKUP
TIME 19:52
POWER
HDD1
HDD2
HDD3
FAN1
FAN2
FAN3
HIGH
MID
LOW

NEW

VRF-HVRF System CITY MULTI: innovation 2022

New outdoor unit PUMY P250/300 YBM

The SMALL Y Line gets enriched by the addition of new models (10 and 12HP) in response to the increasing market need for a compact machine that covers bigger capacity.
The PUMY P250/300 YBM outdoor units are available in a single version with three-phase power supply, double fan structure, side-flow and with different sizes depending on the model. Also available in -BS version, with anti-saline treatment.

New Remote Controller PAR-41MAA

New Model replace PAR-41MAA, the news are:

- **Backlit LCD**
- **Large, easy-to-see display**
  The screen background can be changed to black to suit the ambience of the room.
- **3D i-see sensor ***
  Setting for 3D i-see sensor can be performed.
- **Draft reduction ***
  “Close” has been added to the manual vane angle selection. The air outlet can be closed to reduce drafts from the air conditioner

CITY MULTI	
OUTDOOR UNIT PUMY P250/300 YBM	PAR-41MAA

New HVRF Y Hydronic Packaged systems

The packaged hydronic system HVRF Y, in heat pump is an hydronic solution consisting of a production section water composed of an Outdoor l unit of VRF technology Y t series and a hydronic unit from which the water distribution.
The system is completed by hydronic terminals of different types and sizes, from the native adjustment in the field.
All the components of the hydronic system mentioned above are Mitsubishi Electric branded.
The HVRF Y systems are low environmental pollution with an important reduction of CO_2 equivalent, thanks to the use of R32 refrigerant gas, with low GWP.

New HVRF indoor units W/WL series

Ceiling concealed
PEFY-W VMS-A Medium to low static pressure
PEFY-W VMA-A Medium to high static pressure

Ceiling cassette
PLFY-WL VEM-E 4 way airflow type
PLFY-WL VEM-E 4 way airflow compact type

Floor standing
PFFY-W VCM-A

Wall mounted
PKFY-WL VLM-E

This models are compatible with HVRF R2/ Y systems

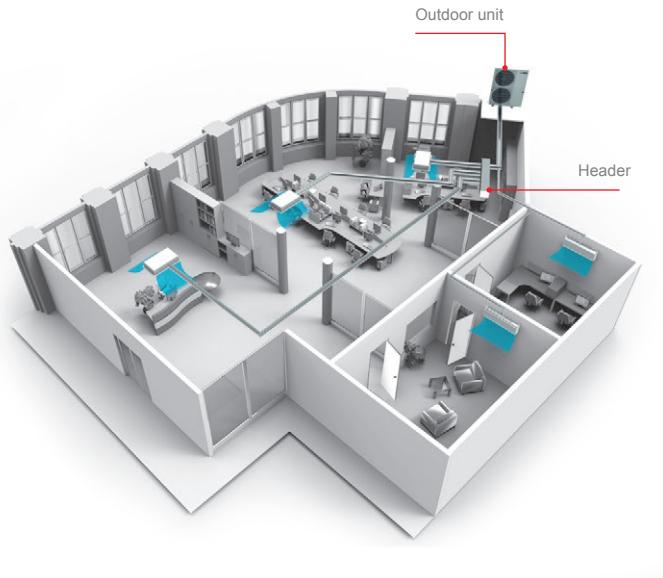
NEW HVRF Y HYDRONIC PACKAGED SYSTEMS

NEW HVRF INDOOR UNITS W/WL SERIES

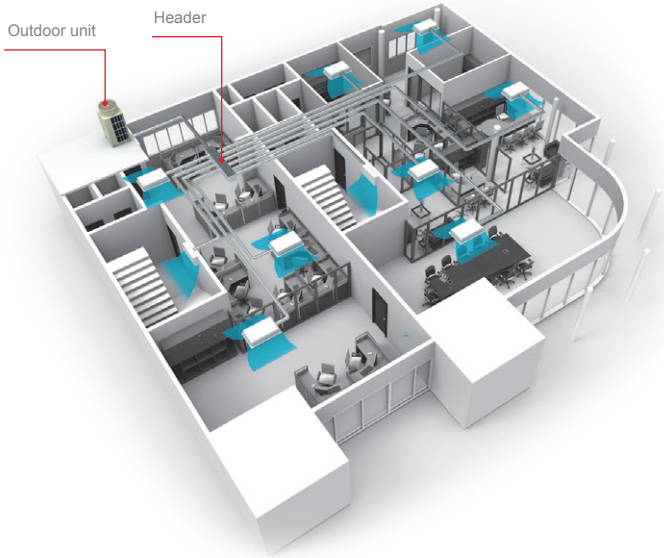
VRF System

System types

SMALL Y AND SMALL Y COMPACT LINES
(SMALL SYSTEM)



Y LINE
(HEAT PUMP)



Y Line

The two-pipe zoned s tem designed for Heat Pump Operation

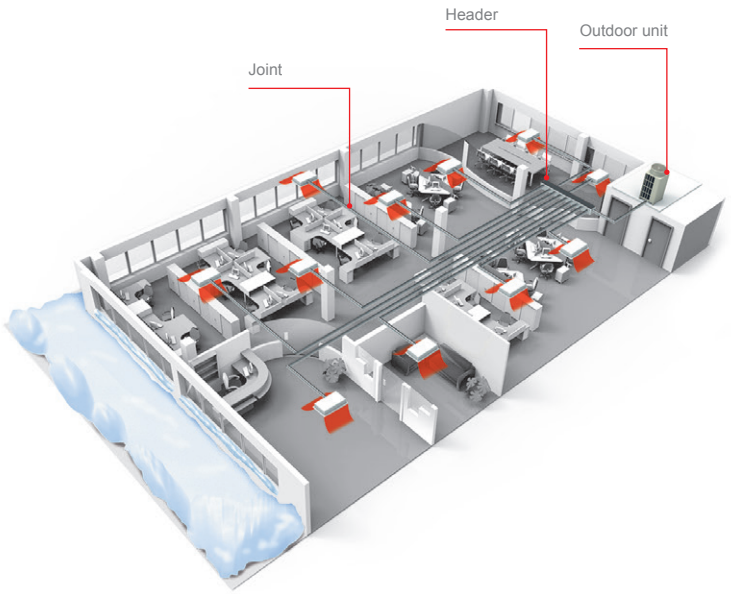
The CITY MULTI Small lines (for small applications) and Y lines (for large applications) make use of a two-pipe refrigerant system, which allows for system changeover from cooling to heating, ensuring that a constant indoor climate is maintained in all zones. The compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively.With a wide line-up of indoor units in connection with a flexible piping system, the CITY MULTI series can be configured for all applications. Up to 11 (Small line) or 50 (Y line) indoor units can be connected with up to 130% connected capacity to maximize engineer's design options. This feature allows easy air conditioning in each area with convenient individual controllers.

R2 Line

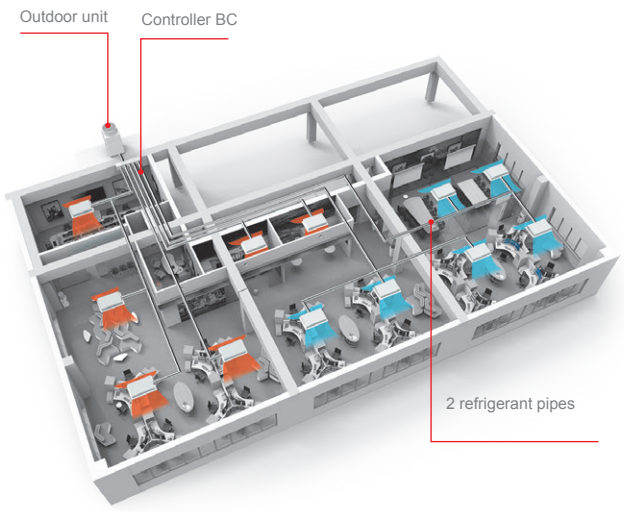
The world's first two-pipe system that Simultaneously Cools and Heats

CITY MULTI R2 line offers the ultimate in freedom and flexibility. Cool one zone while heating another. Our exclusive BC controller makes two-pipe simultaneous cooling and heating possible. The BC controller is the technological heart of the CITY MULTI R2 series. It houses a liquid and gas separator, allowing the outdoor unit to deliver a mixture of hot gas for heating and liquid for cooling, all through the same pipe. This innovation results in virtually no energy wasted by being expelled outdoors. Depending on capacity, up to 50 indoor units can be connected with up to 150% connected capacity.

Y LINE AIR CONDENSED HEAT PUMP



R2 LINE AIR CONDENSED RECOVERY HEAT PUMP SIMULTANEOUSLY HEATING AND COOLING



WY Line

Water energy source system allows switching between cooling and heating

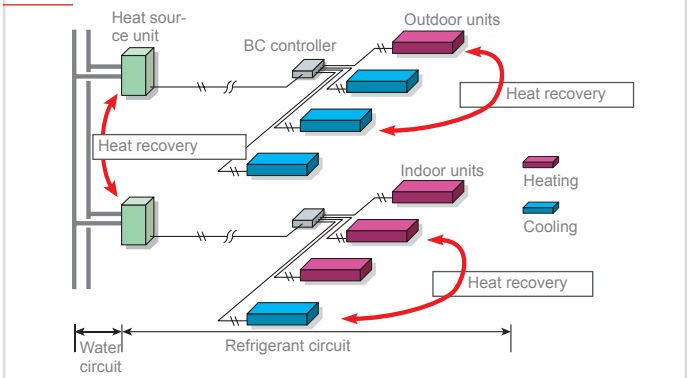
The WY-Line has all the benefits of the Y-Series using water source condensing units. Condensing units can be situated indoors allowing greater design flexibility and no limitation on building size. Depending on capacity, up to 17 to 50 indoor units can be connected to a single condensing unit with individualized and/or centralized control. The two-pipe system allows all CITY MULTI solutions to switch between cooling and heating while maintaining a constant indoor temperature.

WR2 Line

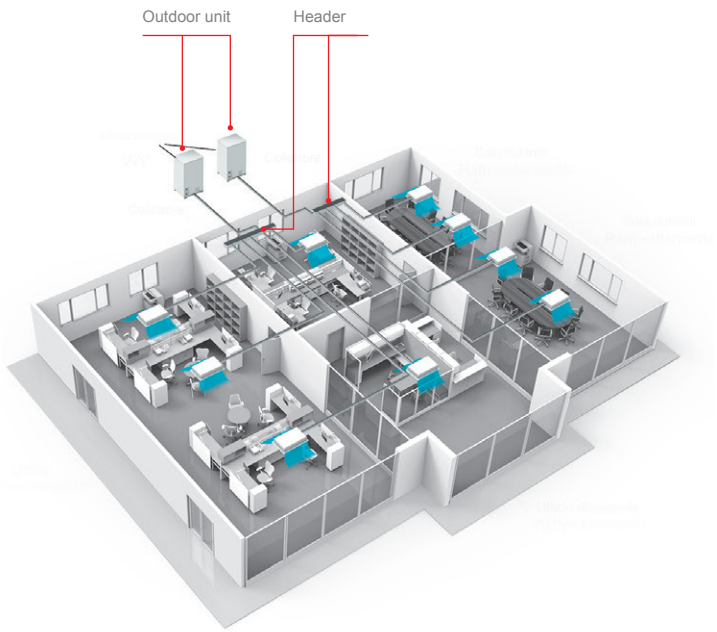
Advanced water heat source unit enjoying the benefits of R2 series

The CITY MULTI WR2 line provides all of the advantages of the R2 series with the added advantages of a water heat source system, making it suitable for wider range of applications in high rises, frigid climates, coastal areas,etc. Not only does it produce heat recovery from the indoor units on the same 2-pipe refrigerant circuit, it also produces heat recovery via the water circuit between heat source units, making it a very economical system.

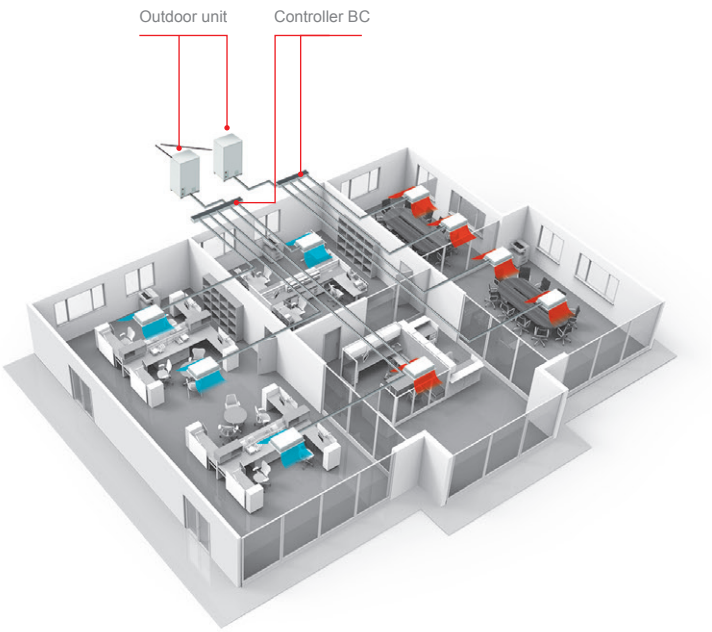
Double heat recovery (WR2)

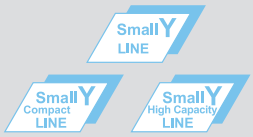


WY LINE
WATER CONDENSED HEAT PUMP



WR2 LINE SIMULTANEOUSLY HEATING AND COOLING WATER CONDENSED



	**CITY MULTI SMALL Y SMALL Y COMPACT SYSTEM SMALL Y -HIGH CAPACITY- LINE**	Compact heat pump systems
	**CITY MULTI Y ECOSTANDARD SYSTEM**	Heat pump systems optimized for cooling operation
	**CITY MULTI Y HIGH EFFICIENCY SYSTEM**	High efficiency heat pump systems with continuous heating
	**CITY MULTI Y NEXT STAGE SYSTEM**	Heat pump systems with continuous heating
	**CITY MULTI Y NEXT STAGE HIGH EFFICIENCY SYSTEM**	High efficiency heat pump systems with continuous heating
	**CITY MULTI WY SYSTEM**	Water condensed Heat Pump systems
	**CITY MULTI R2 NEXT STAGE SYSTEM**	Two-pipes Cooling / Heating simultaneous systems with heat recovery and continuous heating
	**CITY MULTI R2 NEXT STAGE HIGH EFFICIENCY SYSTEM**	High Efficiency two-pipes Cooling / Heating simultaneous systems with heat recovery and continuous heating
	**CITY MULTI WR2 SYSTEM**	Water condensed Heat Recovery systems

	**SINGLE PHASE** PUMY-SP VKM (-BS) - HP 4,5-6 PUMY-P VKM (-BS) - HP 4,5-6 **THREE PHASE** PUMY-P YKM (-BS) - HP 4,5-8 PUMY-P YBM (-BS) - HP 10,12
	**SINGLE Y** PUHY-P YKA (-BS) - HP 8~20 **DOUBLE Y** PUHY-P YKA (-BS) - HP 22~40 **LARGE Y** PUHY-P YSKA (-BS) - HP 42~60
	**SINGLE Y** PUHY-EP YLM-A1 (BS) - HP 8~20 **DOUBLE Y** PUHY-EP YSLM-A1 (-BS) - HP 22~24 **TRIPLE Y** PUHY-EP YSLM-A1 (-BS) - HP 26~54
	**SINGLE Y** PUHY-P YNW-A1 (-BS) - HP 8~20 **DOUBLE Y** PUHY-P YSNW-A1 (-BS) - HP 16~36 **TRIPLE Y** PUHY-P YSNW-A1 (-BS) - HP 38~54
	**SINGLE Y** PUHY-EP YNW-A1 (-BS) - HP 8~20 **DOUBLE Y** PUHY-EP YSNW-A1 (-BS) - HP 16~36 **TRIPLE Y** PUHY-EP YSNW-A1 (-BS) - HP 38~54
	**SINGLE WY** PQHY-P YLM-A1 - HP 8~24 **DOUBLE WY** PQHY-P YSLM-A1 - HP 16~36
	**SINGLE R2** PURY-P YNW-A1 (-BS) - HP 8~22 **DOUBLE R2** PURY-P YNW-A1 (-BS) - HP 16~44
	**SINGLE R2** PURY-EP YNW-A1 (-BS) - HP 8~22 **DOUBLE R2** PURY-EP YNW-A1 (-BS) - HP 16~44
	**SINGLE WR2** PQRY-P YLM-A1 - HP 8~24 **DOUBLE WR2** PQRY-P YSLM-A1 - HP 16~36

System				HP	4,5	5	6	8	10	12	14	16	
				Model	P112	P125	P140	P200	P250	P300	P350	P400	
Air condensed	Heat pump Small Y Line Small Y Compact Line Small Y -High Capacity- Line	PUMY-P Y(V)KM (-BS) PUMY-SP VKM (-BS) PUMY-P YBM (-BS)		Single phase	4,5	5	6						
				Three phase	4,5	5	6	8	10	12			
	Ecostandard Y Line	PUHY-P YKA-(BS) PUHY-P YSKA-(BS)		SINGLE				8	10	12	14	16	
				DOUBLE									
				TRIPLE									
	Heat pump High Efficiency Y Line	PUHY-EP YLM-A1(-BS) PUHY-EP YSLM-A1(-BS)		SINGLE				8	10	12	14	16	
				DOUBLE									
				TRIPLE									
	Heat pump Y Next Stage Line	PUHY-P YNW-A1(-BS) PUHY-P YSNW-A1(-BS)		SINGLE				8	10	12	14	16	
				DOUBLE								8+8	
				TRIPLE									
	Heat pump High Efficiency Y Next Stage Line	PUHY-EP YNW-A1(-BS) PUHY-EP YSNW-A1(-BS)		SINGLE				8	10	12	14	16	
				DOUBLE								8+8	
				TRIPLE									
	Heat recovery R2 Next Stage Line	PURY-P YNW-A1(-BS) PURY-P YSNW-A1(-BS)		SINGLE				8	10	12	14	16	
				DOUBLE								8+8	
	High Efficiency Heat recovery R2 Next Stage Line	PURY-EP YNW-A1(-BS) PURY-EP YSNW-A1(-BS)		SINGLE				8	10	12	14	16	
				DOUBLE								8+8	
Water condensed	Heat pump WY Line	PQHY-P YLM-A1 PQHY-P YSLM-A1		SINGLE				8	10	12	14	16	
				DOUBLE								8+8	
	Heat recovery WR2 Line	PQRY-P YLM-A1 PQRY-P YSLM-A1		SINGLE				8	10	12	14	16	
				DOUBLE								8+8	

18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
P450	P500	P550	P600	P650	P700	P750	P800	P850	P900	P950	P1000	P1050	P1100	P1150	P1200	P1250	P1300	P1350	P1400	P1450	P1500
18	20																				
		10+12	10+14	10+16	10+18	12+18	16+16	16+18	18+18	18+20	20+20										
												12+12 +18	12+14 +18	14+16 +16	16+16 +16	16+16 +18	16+18 +18	18+18 +18	18+18 +20	18+20 +20	20+20 +20
18	20																				
		10+12	12+12																		
				8+8 +10	8+8 +12	8+10 +12	8+12 +12	10+12 +12	12+12 +12	12+12 +14	12+12 +16	12+14 +16	14+14 +16	14+14 +18	14+16 +18	14+18 +18	16+18 +18	18+18 +18			
18	20																				
8+10	10+10	10+12	12+12	10+16	14+14	14+16	14+18	16+18	18+18												
										10+14 +14	10+14 +16	10+16 +16	14+14 +16	14+16 +16	16+16 +16	16+16 +18	16+18 +18	18+18 +18			
18	20																				
8+10	10+10	10+12	12+12	10+16	14+14	14+16	14+18	16+18	18+18												
										10+14 +14	10+14 +16	10+16 +16	14+14 +16	14+16 +16	16+16 +16	16+16 +18	16+18 +18	18+18 +18			
18	20	22																			
8+10	10+10	10+12	12+12	12+14	14+14	14+16	16+16	16+18	18+18	18+20	20+20	20+22	22+22								
18	20	22																			
8+10	10+10	10+12	12+12	12+14	14+14	14+16	16+16	16+18	18+18	18+20	20+20	20+22	22+22								
18	20	22	24																		
8+10	10+10	10+12	12+12		14+14	14+16	16+16	16+18	18+18												
18	20	22	24																		
8+10	10+10	10+12	12+12		14+14	14+16	16+16	16+18	18+18												

Key Technologies

Mitsubishi Electric: state of the art technology and continuous pursuit of improvement. Quality, innovation and performance of VRF CITY MULTI systems.

Tecnology

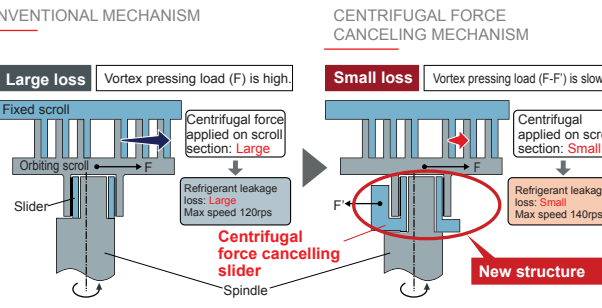
NEW NEXT STAGE generation

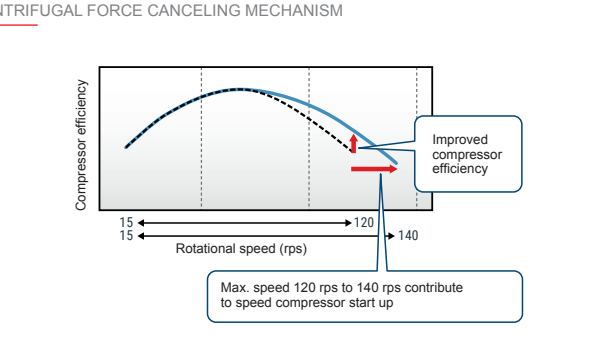
New compressor NEXT STAGE GENERATION

The compressor, known as the heart of the air conditioner, has been newly developed. A new centrifugal force canceling mechanism and a new multi-port mechanism have been developed. In addition, we have mounted a high-efficiency motor. The synergetic effect of these new technologies increases the compressor performance and efficiency, and also helps to improve the performance of the outdoor unit.

Centrifugal force canceling mechanism (8 to 14HP)

The structure of the scroll compressor causes a centrifugal force during operation. Conventionally, that centrifugal force is applied onto the scroll section.
This causes refrigerant to leak, and restricts the increase in rotational speed to a maximum of 120rps.
With the new compressor, a new structure (centrifugal force canceling mechanism) has been mounted to suppress the centrifugal force. This mechanism successfully suppresses the centrifugal force generated at the scroll section, reduces refrigerant leakage losses, and increases the compressor efficiency. The maximum rotational speed has been increased from the conventional 120rps to 140rps.
This new mechanism also speeds up the start of operation, and enables operations such as preheat defrost operation and the smooth auto-shift startup mode.

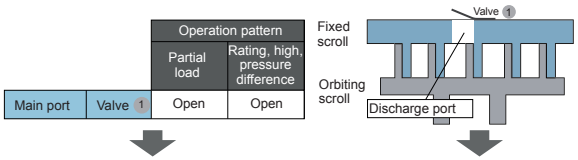




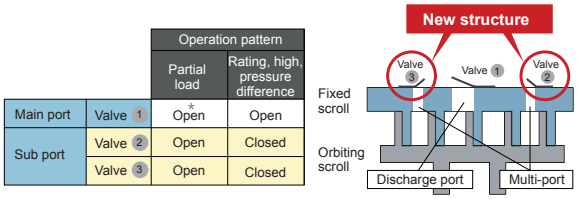
Multi-port mechanism

Efficient partial load operation is realised by avoiding overcompression. With the scroll compressor, the distance of the compression process in the scroll is usually fixed, so over-compression occurs during low loads and low rotation. The new compressor is equipped two sub-ports in addition to the conventional discharge port to reduce this over-compression loss during low loads. In operation conditions having a low compression rate, the distance in the compression process is kept short by that successfully avoiding unnecessary compression, and contributing to efficient partial load operation.

CONVENTIONAL STRUCTURE

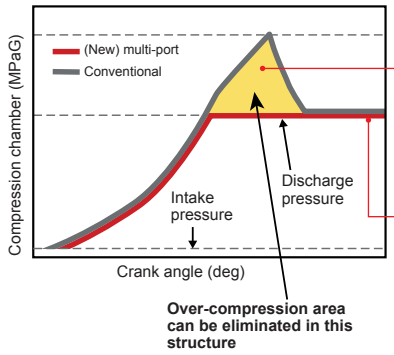


NEW STRUCTURE WITH MULTI-PORT DESIGN



*The sub-port is opened during partial load operation to discharge the over-compressed gas.

REDUCED OVER-COMPRESSION LOSS (MULTI-PORT)



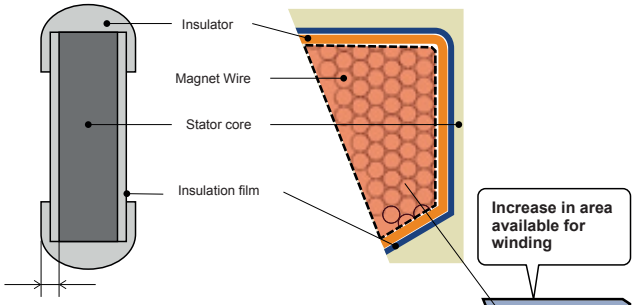
Conventional model
Conventionally, gas refrigerant is compressed to a set pressure, and then lowered to the target discharge pressure at which it is discharged. This causes drive losses from over-compression.

Multi-port
When the target discharge pressure is reached, the multiport opens, and the gas refrigerant is discharged. This reduces drive losses caused by over-compression.

Improved high-efficiency motor

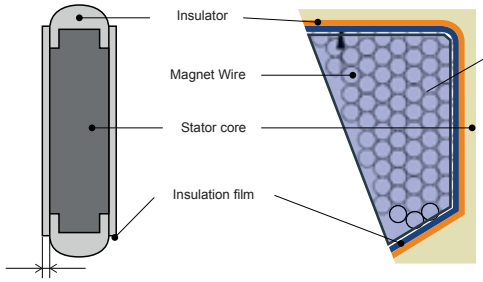
The insulator section that traditionally created a dead space is eliminated by insulating the motor's stator film. Since winding can be set in that section, the winding area can be increased by approx. 9%. The wire diameter has also been increased by two ranks, so the resistance between terminals is reduced, and the insulation distance is shorter. This improves the motor's operation performance and contributes to high-efficiency operation of the compressor.

CONVENTIONAL MODEL (YLM)



The insulator section is large, and the area where the copper wire can be wound is small.

NEW MODEL (YNW)



The motor can be wound in the section where the insulator was, and a larger wire diameter can be used.

Flat tube

FLAT TUBE thermal exchange coil

With the new **Y High Efficiency and R2 High Efficiency lines** of outdoor units, Mitsubishi Electric has also introduced the new FLAT TUBE all-aluminium thermal exchange coil. The new solution, which is covered by global patents, sets new standards for heating and cooling performance while also reducing the overall size of the machine.

The FLAT TUBE technology coil – also known as a "micro-channel heat exchanger" – consists of three components: the flat tubing, the internal fins forming the micro-channels, and two refrigerant fluid collector boxes.

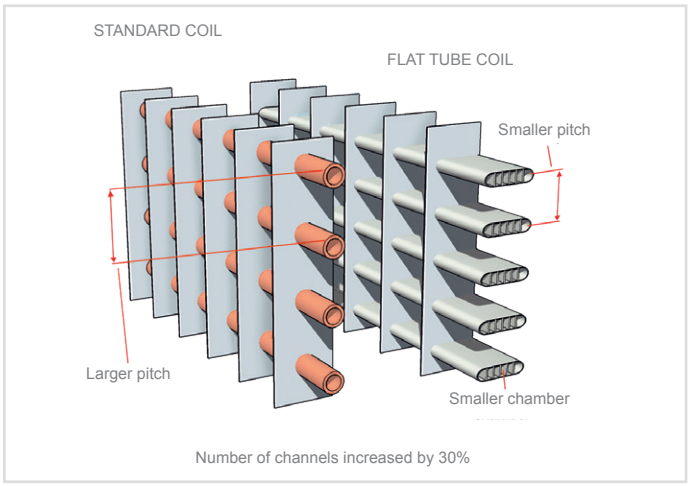
This type of heat exchanger was used for the first time in around 2008 in the automotive industry. With its globally patented FLAT TUBE system, Mitsubishi Electric has further developed this technology to offer even more advantages.

Unparalleled quality, efficiency and product integrity are the tangible results of a production process based on a single brazing stage instead of the 200-300 manually brazed individual connections necessary with a conventional copper/aluminium coil. Moreover, the FLAT TUBE heat exchanger requires a smaller

charge volume than a conventional bi-metal coil, as the microchannels limit the available volume for the refrigerant fluid while also creating a larger thermal exchange surface area.

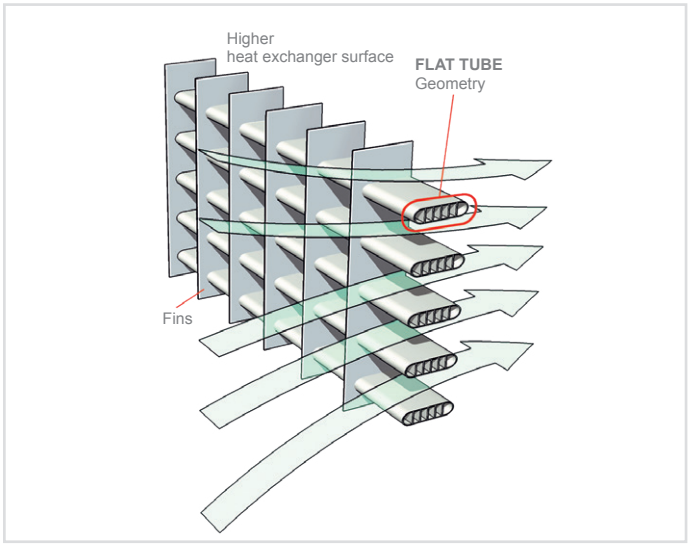
Weather resistance is a key factor for the heat exchanger coil, as it is perhaps the component that is most exposed to the harmful effects of the atmosphere.

Here too, the **FLAT TUBE** coil outperforms other solutions: the single component in aluminium only is far less susceptible to corrosion than a conventional bi-metal coil in copper and aluminium. As if that were not already enough, the direct expansion coil of the new **Y High Efficiency and R2 High Efficiency lines** outdoor units receive a special galvanic treatment with **sacrificial zinc anodes** to further prevent any possibility of corrosion, while a **waterproofing treatment** protects the copper pipes connecting the heat exchanger coil to the refrigeration circuit against electrolytic corrosion. A special version (denominated -BS) may be ordered for installations in highly saline conditions or coastal zones, which is specifically designed for these applications.



- **+30% more piping**
- **+17% more Contact with Piping**
- **+26% more Contact with Refrigerant**
- **Smaller Pitch and Pipe Chamber**
- **Reduced Refrigerant Volume**

A world first for VRF systems



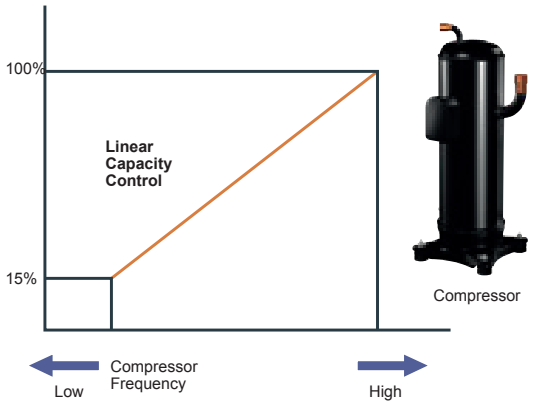
Inverter-driven compressor technology

All CITY MULTI compressors are of the inverter-driven type, capable of precisely matching a building's cooling and heating demands.

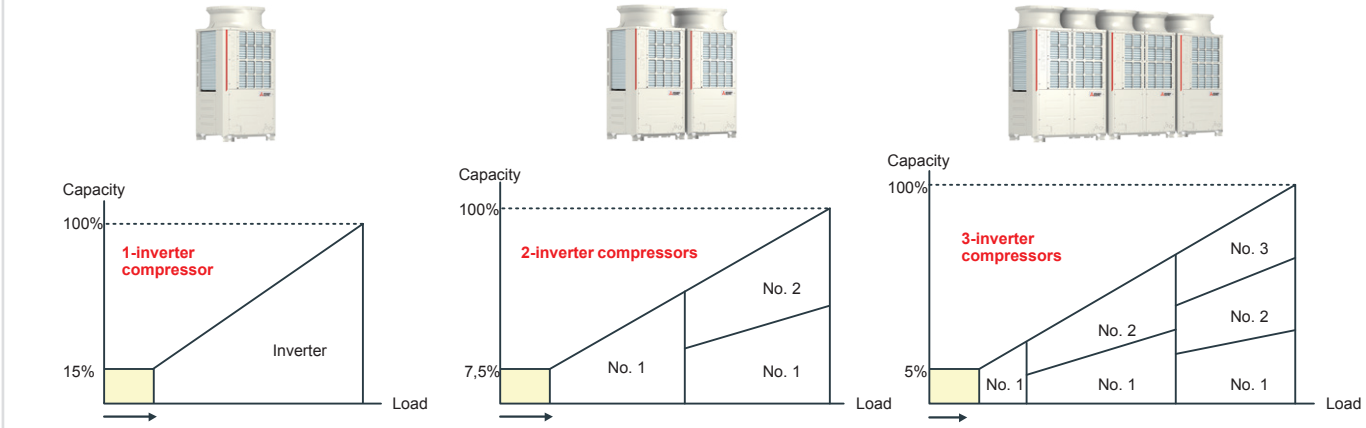
The compressor varies its speed to match the indoor cooling or heating demand and therefore only consumes the energy that is required. When an inverter driven system is operating at partial load, the energy efficiency of the system is significantly higher than that of a standard fixed speed, non-inverter system.

The fixed speed system can only operate at 100%, however, partial load conditions prevail for the majority of the time. Therefore, fixed speed systems cannot match the annual efficiencies of inverter driven systems. Using proven single inverter driven compressor technology, the CITY MULTI range is favored by the industry for low starting currents (just 8 amps for a 20HP outdoor unit) and smooth transition across the range of compressor frequencies.

HEATING / COOLING CAPACITY

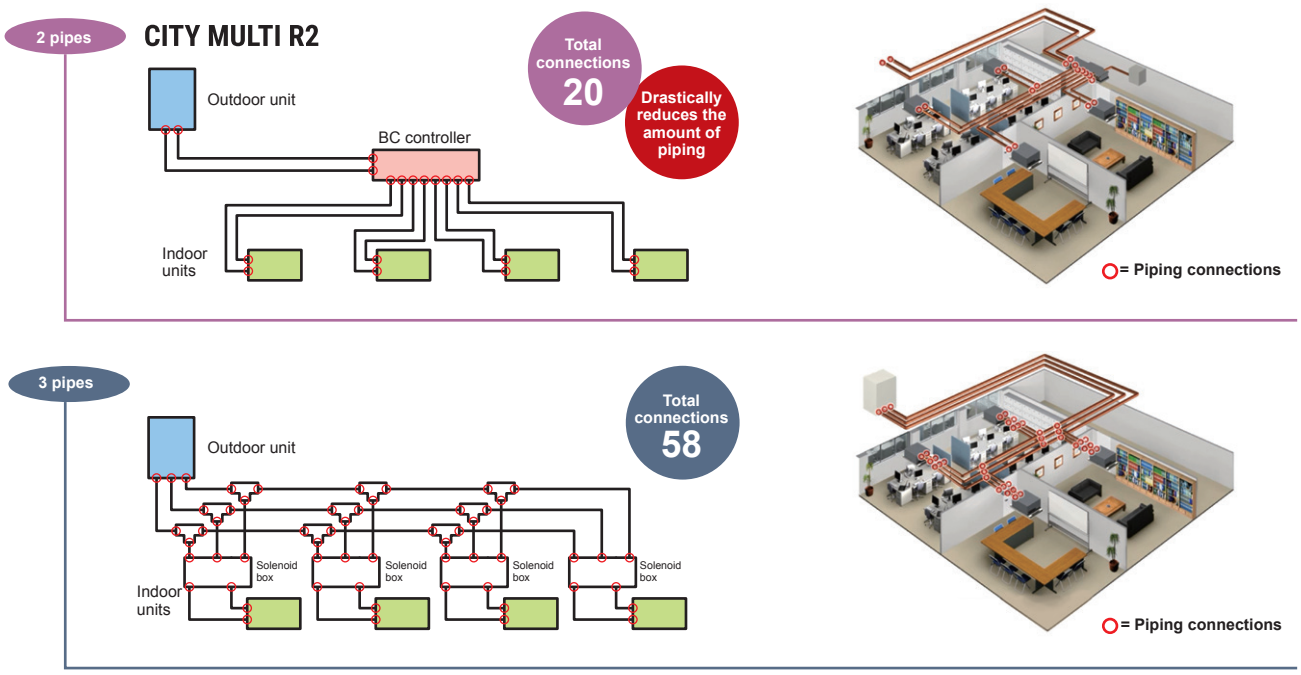


STABLE AND SMOOTH OPERATION



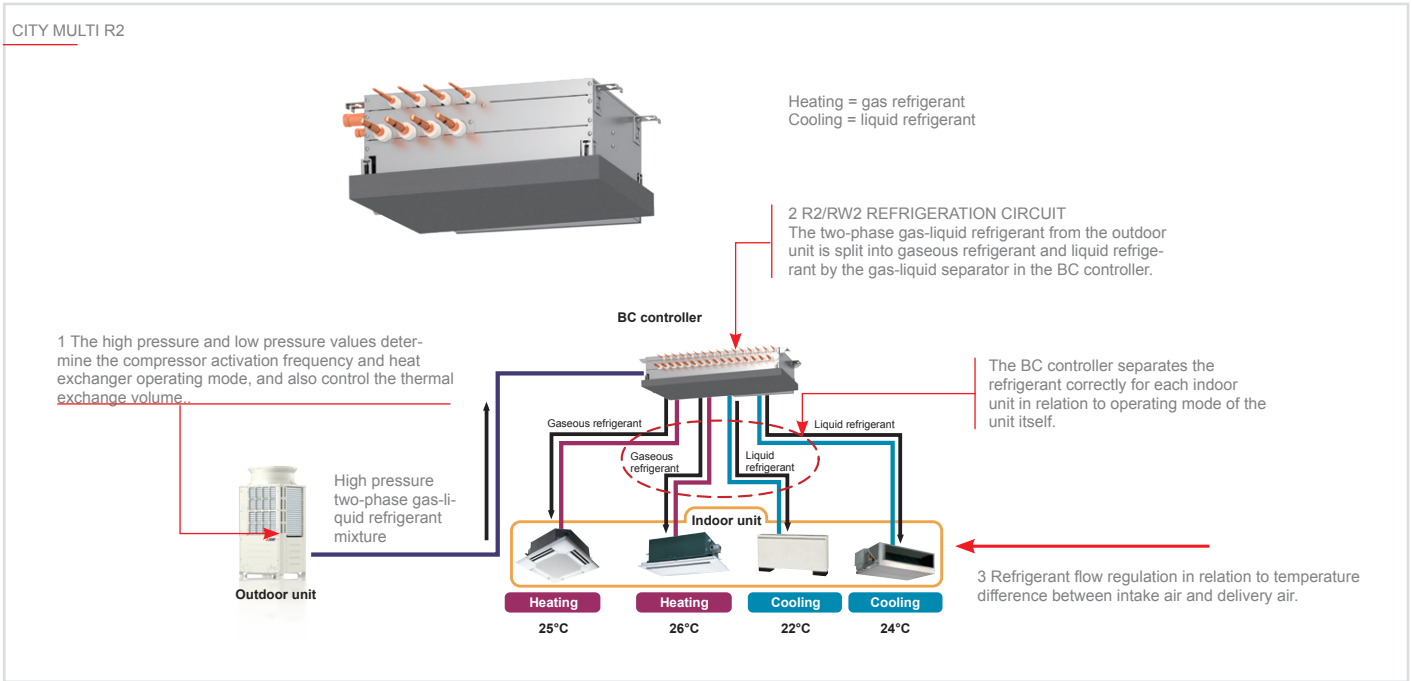
Heat recovery system

Comparison between different systems with different pipe connection points



How does the R2 / WR2 heat recovery system work with two pipes?

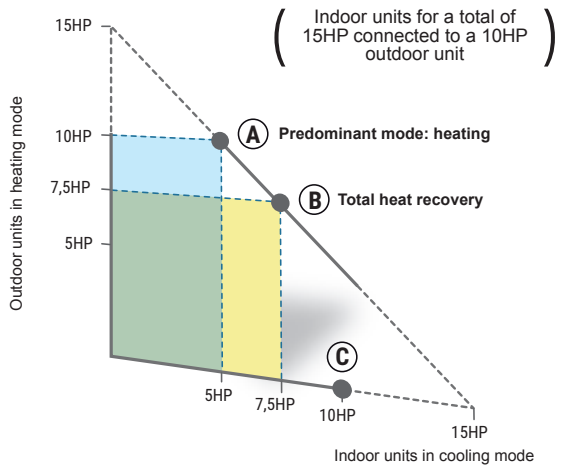
The secret of the VRF CITY MULTI heat recovery system lies in the BC controller. The BC controller contains a liquid/gas separator which allows the outdoor unit to produce a two-phase mixture of hot gas for heating and liquid for cooling delivered through the same pipe. Three pipe systems use one pipe for each of these two phases. The mixture is separated when it reaches the BC controller, and the correct phase (gas or liquid) is sent to each indoor unit in relation to individual demand for heating or cooling.



Heat recovery system

With the heat recovery system, the more often the simultaneous cooling and heating function is used, the greater the energy savings.

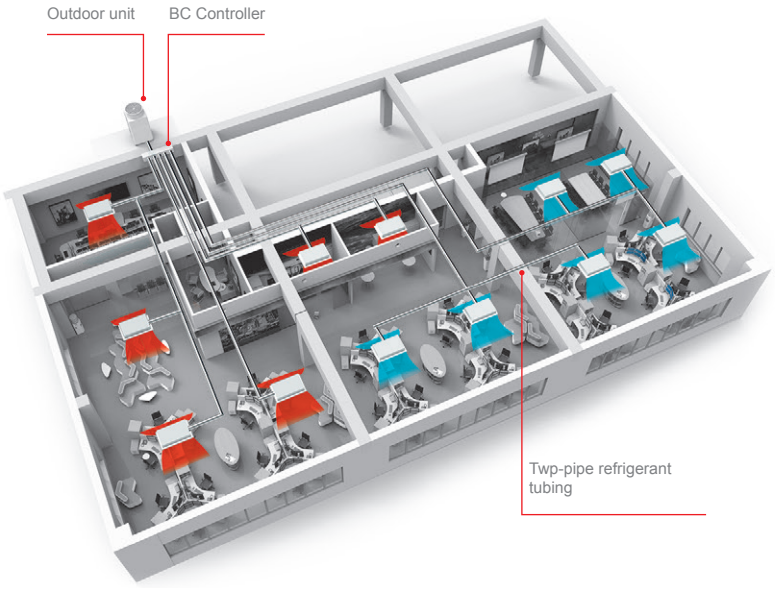
SYSTEM FUNCTIONAL DIAGRAM CITY MULTI R2/WR2



Why use heat recovery?

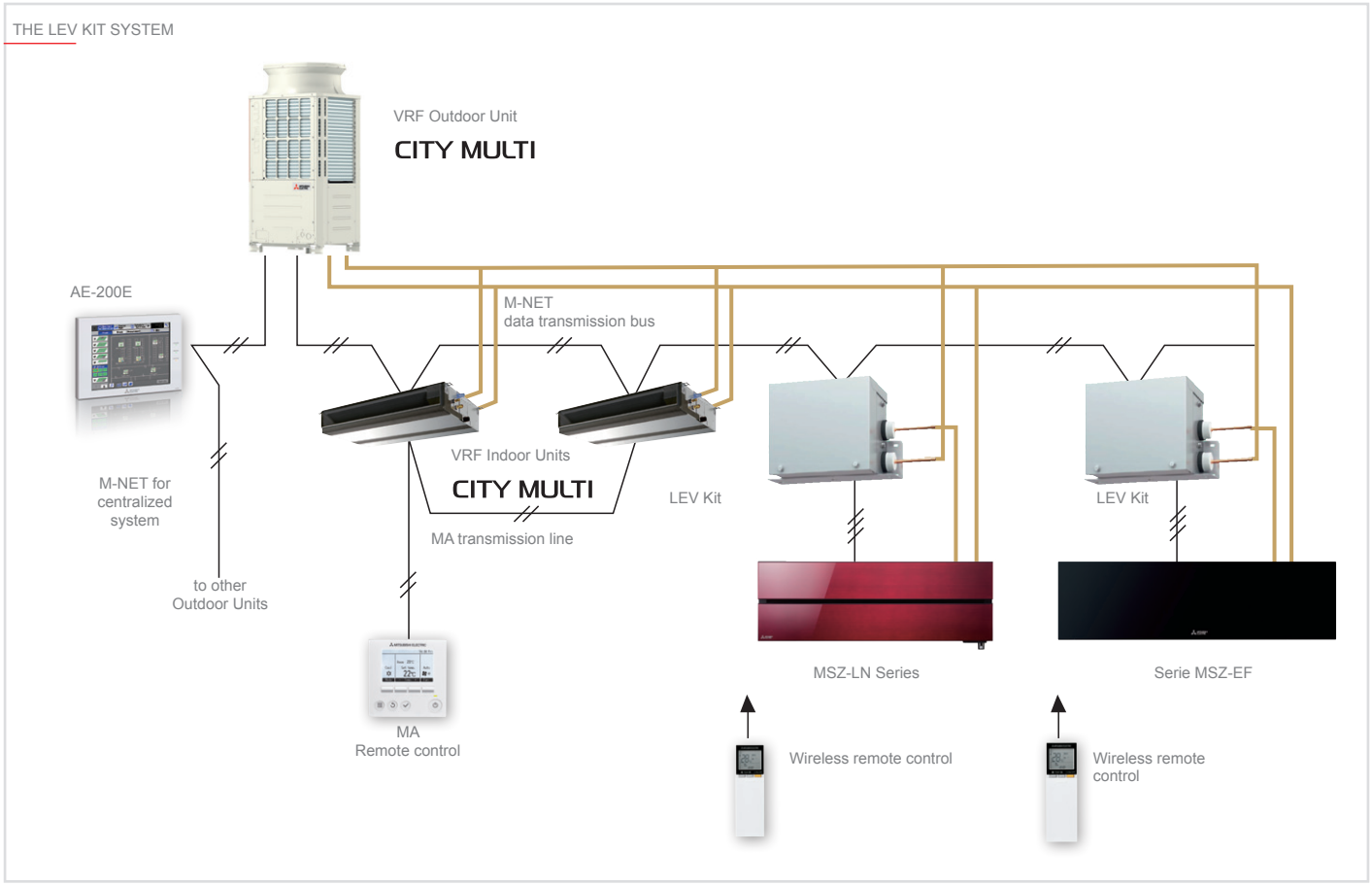
Flexibility and efficacy are decisive factors when choosing a system with heat recovery capability. For instance, while a heat pump system is suitable for an office with a large open space plan, in an office space subdivided into more units, a system is needed that can simultaneously heat and cool different zones in accordance with the preferences of each individual user. The efficacy of these systems stems from their ability to use by-products of cooling and heating to transfer energy where it is needed, therefore functioning as a balanced heat exchanger offering savings of up to 20% in operating costs compared with a conventional heat pump system. Moreover, the number of connection points needed for an R2 / WR2 system is significantly lower than the number required by a three pipe system. This reduces installation costs, further adding to the savings offered by using the VRF CITY MULTI system.

WHY USE HEAT RECOVERY?



The LEV Kit system

The LEV Kit makes it possible to use the indoor units of Residential Line – which represent the state of the art in Mitsubishi Electric air conditioning system design – together with VRF CITY MULTI systems. Mixed installations can therefore be created with complete freedom.



The Mitsubishi Electric external units compatible with the LEV Kit are:

- **Small Y Line**
- **Small Y Compact Line**
- **Small Y High Capacity Line**
- **Y Ecostandard Line**
- **Y High Efficency Line**
- **Y Next Stage Line**
- **Y Next Stage High Efficency Line**
- **R2 Next Stage Line**
- **R2 Next Stage High Efficency Line**
- **WY Line**
- **WR2 Line**

Types and Sizes available Residential indoor units	15	18	20	22	25	35	42	50
MSZ-LN_VG(2)		•			•	•		•
MSZ-AP_VG(K)	•		•		•	•	•	•
MSZ-EF_VE/VG		•		•	•	•	•	•
MSZ-SF_VA/VE3	•		•	•	•	•	•	•
MFZ-KJ_VE					•	•		•
MFZ-KT_VG					•	•		•

ATTENTION !! FOR DETAILS ON COMPATIBILITY BETWEEN EACH MODEL OF INDOOR UNITS AND OUTDOOR UNITS PLEASE CONTACT YOUR LOCAL DISTRIBUTOR

Functions

M-Net Power

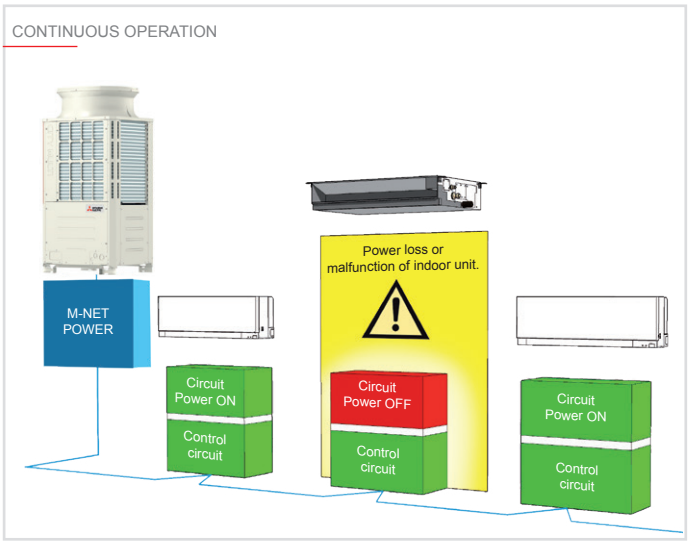
With the M-Net transmission line and the use of separate power and control circuits for indoor units, the following states can be identified automatically:

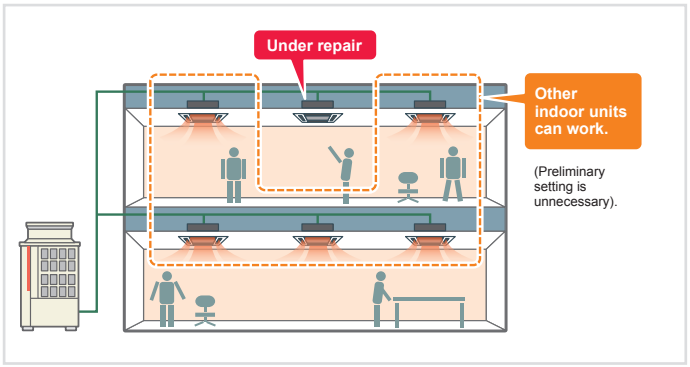
- indoor unit malfunction
- power loss to indoor unit.

In the event of one of these conditions, the outdoor unit isolates the malfunctioning indoor unit or indoor unit receiving no power to ensure the continued electrical and refrigeration functionality of the system with no action required from a technician and/or a system administrator. This allows total flexibility in planning and laying out 220V AC power circuits, without the need for shared main lines and without requiring any additional devices to attain compliance with legislation for electrical systems. This circuit configuration is essential for situations where the system itself is shared by multiple owners or tenants, and where each must be able to electrically isolate their respective indoor terminal sections when required.

Continuous operation

In the event of power loss or partial malfunction of one or more indoor units, the system continues to function uninterruptedly and without requiring any action from a technician and/or system administrator.

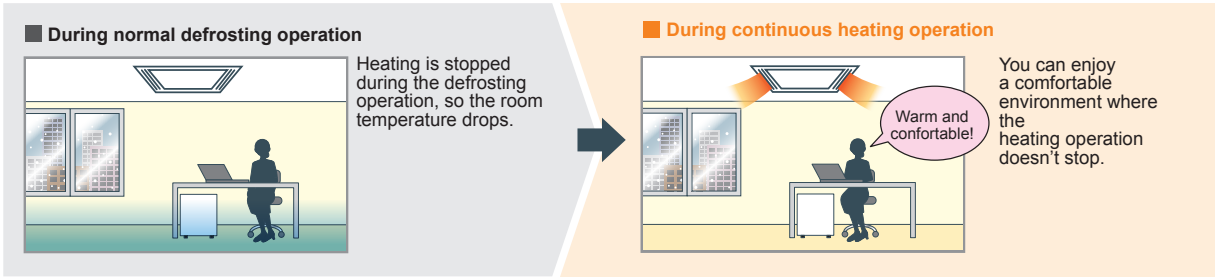




Continuous heating operation

Normally, it is necessary to stop the heating operation during defrosting. However, the continuous heating operation method makes it possible to perform defrosting while the heating operation continues.

Reduction in the stoppage time of the heating operation prevents drops in room temperature.
Use a dip switch on the outdoor unit to switch between the continuous heating operation method and the conventional defrosting method.



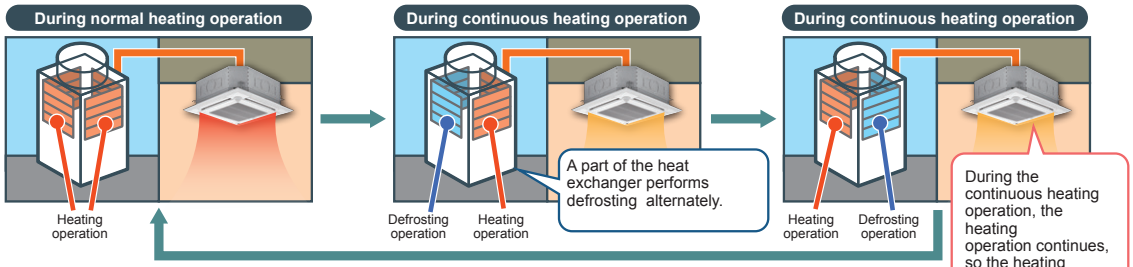
Continuous heating operation image (single unit)

The heat exchanger of the outdoor unit is split into parts. Even when defrosting is necessary, the heating operation is continued with a part of the heat exchangers.

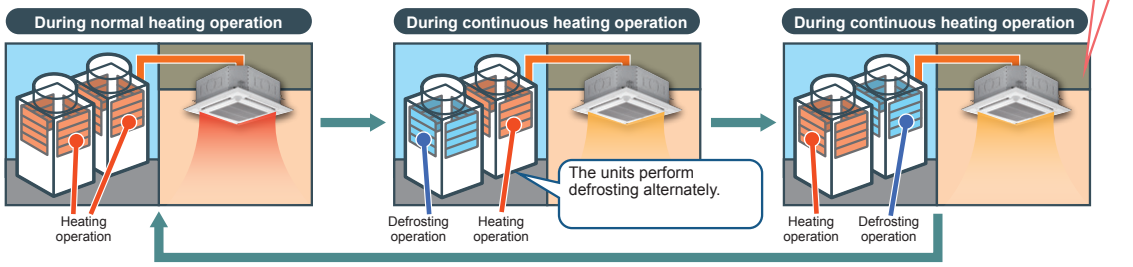
Continuous heating operation image (combination)

With the combination model, units perform defrosting alternately. While one unit is performing defrosting, the other continues heating.

CONTINUOUS HEATING OPERATION IMAGE



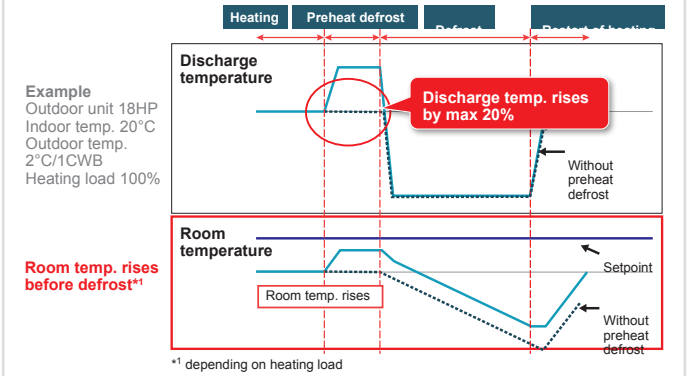
CONTINUOUS HEATING OPERATION IMAGE



Preheat defrost operation

The new outdoor unit is equipped with a preheat defrost operation that raises the discharge temperature of the air before beginning defrost operation. This contributes to raising the room temperature before the start of defrost operation and prevents room occupants experiencing a chilling sensation.

PREHEAT DEFROST ON/OFF



During activation of the Preheat defrost, the indoor ambient temperature does not exceed the set-point temperature.

Flexible Noise Setting

The “Low Noise” mode, which conventionally only had one pattern, has been increased to four patterns so that a mode can be selected from a total of five patterns, including the rated pattern. The low-noise mode has four patterns 85%, 70%, 60% and 50% in respect to the fan speed. This can be set with the outdoor unit’s DIP switch. The pattern can be selected according to the customer’s requests when low-noise operation is required.

FLEXIBLE NOISE SETTING

Settings function

1) 50%
2) **60%**
3) **70%**
4) **85%**

3 new settings available

5) 100% (nominal speed)

200% extended connectivity system

The innovative Ecodan® HWS & ATW unified VRF system by Mitsubishi Electric for cooling, heating and domestic hot water production brings VRF technology to the heating market.
To ensure correct power usage in applications such as centralized residential systems and hotels, where permitted by the coincidence factor, Mitsubishi Electric offers a system allowing up to 200% extended connectivity.
The 200% extended connectivity system offers the advantage of simplified, intuitive and, most importantly, automated operation comparable to a conventional centralized heating system (e.g. gas boiler), meaning that the professional installer is no longer required to include complicated, redundant management and adjustment systems.

Extension of operating limit in Cooling to 52°C

In certain types of installation and in areas with high building density the passage of air can be obstructed. In very high outdoor temperature conditions and if the air expelled by the unit's fan is not correctly removed, it can stagnate and increase the air temperature around the machine. Thanks to an extended operating range of up to 52°C, the system can operate uninterruptedly even in these conditions.

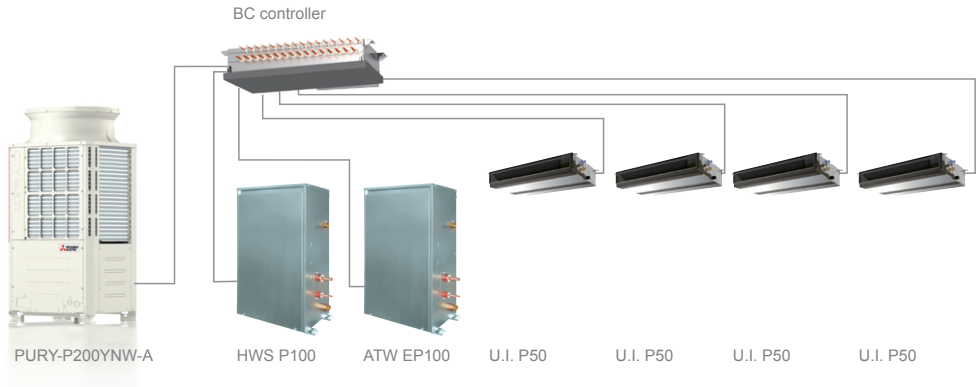
System architecture

For example, in a hypothetical installation with a P200 outdoor unit, this system permits the connection of units with a total power index equal to 200% that of the outdoor unit (P400), subdivided according to the following rules:

- Maximum power index for hydronic modules = P200 (100% of outdoor unit power index)
- Maximum power index for indoor modules = P200 (100% of outdoor unit power index)

A VRF Ecodan® installation with this configuration will ensure simultaneous operation up to a power index of 130%, in the case of a Y heat pump system, and up to 150% in the case of an R2 heat recovery simultaneous heating and cooling system.

EXAMPLE OF 200% EXTENDED CONNECTIVITY SYSTEM WITH R2 SERIES



The right power for the right application

The 200% extended connectivity system conceived by Mitsubishi Electric is applicable only for mixed configurations with simultaneous production functions: Heating with standard VRF indoor units, primary heating function with ATW hydronic modules and domestic hot water production with HWS modules (in this case, only with R2 heat recovery simultaneous cooling and heating systems). This system requires that a precise operating limit is defined that will ensure that the outdoor unit power drawn is appropriate for the ambient loads effectively to be satisfied in all operating conditions and at all times. As a consequence, it is always important to evaluate maximum simultaneous power demand in the different operating modes possible.

Operation with heat pump systems Y (PUHY))

Application	ATW Hydronic Module Indoor unit	Indoor unit
	Primary Heating	Air Cooling and Heating
Winter	On	Off
Autumn/Spring	Off	On
Summer	Off	On

Operation with simultaneous cooling and heating heat recovery systems (R2 (PURY))

Application	ATW Hydronic Module	ATW Hydronic Module	Indoor unit
	DWH Production	Primary Heating	Air Cooling and Heating
Winter	On (365days/year)	On	Off
Autumn/Spring	On (365days/year)	Off	On
Summer	On (365days/year)	Off	On

Extended settable temperature range in cooling mode, with minimum temperature of 14°C*

Where the ability to cool to temperatures lower than the standard lowest comfort value of 19°C (typically for sports centres, laboratories etc.) is necessary, the settable temperature range in cooling mode may be extended to offer a lowest temperature of 14°C.
The indoor unit fan is run at a higher speed in this configuration (except with the SMALL Y model outdoor unit of the PUMY series).
*Contact your local distibutor for compatible indoor units with this function.

Emergency backup function

Y Series (Ecostandard Line, Y Line and Y High Efficiency Line) and R2 Series (R2 Line and R2 High Efficiency Line) combined modules offer unparalleled reliability with the new emergency backup function, which is easily activated from the remote control of any indoor unit in the event of a system malfunction.
The backup function allows the system to continue operating in heating and cooling mode for an average period of 4 hours.

Rotation function

Y Series (Ecostandard Line, Y Linea nd Y High Efficiency Line) and R2 Series (Y Line and Y High Efficiency Line) combined modules use an automatic “Rotation Function” routine which optimises the usage of indoor and outdoor units to extend the lifespan of all system components.

Energy efficiency control

Evaporating temperature control (during cooling)

In a traditional system, the evaporation temperature is kept constant regardless of the system load conditions. In low load conditions (when thermal loads to be dealt with are limited) increasing the evaporation temperature of the system decreases the compressor's workload and consequently limits the electrical absorption of the outdoor unit without affecting the environmental comfort level.

EVAPORATING TEMPERATURE CONTROL (DURING COOLING) NORMAL MODE

The evaporating temperature is kept constant regardless of the load. Even at low loads, the normal evaporating temperature does not change, which leads to energy losses during partial load operation.

SMART EVAPORATING TEMPERATURE CONTROL MODE

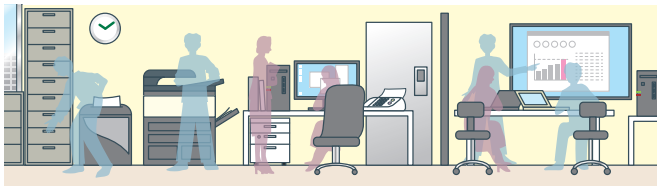
The evaporating temperature is increased and the compressor input is decreased according to the load, resulting in increased operating efficiency.
There are two patterns to control the evaporating temperature as follows.

1) The evaporating temperature is controlled to be constant, regardless of the ΔT. The evaporating temperature is set to a value that is higher than the normal evaporating temperature.

2) The evaporating temperature is controlled by shifting it according to the ΔT. The user can select from 4 control patterns.

* The availability of 1 and 2 varies depending on the model. Refer to the function table.
* Changing the evaporating temperature reduces latent heat capacity. Select an appropriate pattern according to the installation conditions.

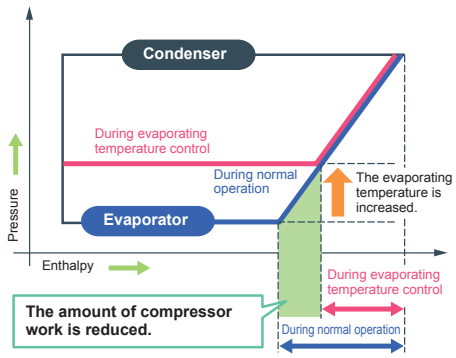
SUITABLE SITUATIONS



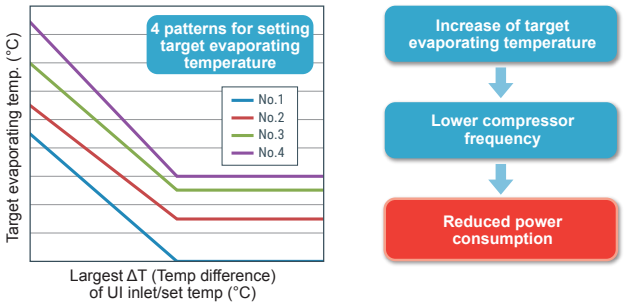
- Spaces with constant high temperatures from heat sources such as OA equipment
- When the load is low during periods when air conditioners are used for cooling (such as during the morning).

The new outdoor units are equipped with an evaporation temperature selection function, which automatically takes the system load conditions into account.

1) EVAPORATING TEMPERATURE CONTROL IMAGE



2) EVAPORATING TEMPERATURE CONTROL IMAGE (WITH 4 PATTERNS)

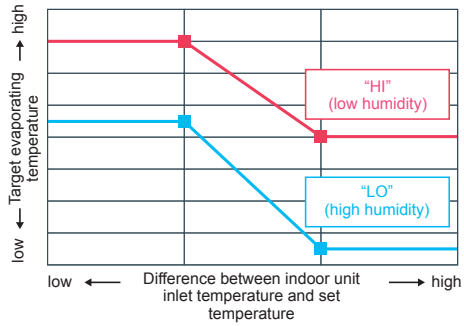


*1) To change the evaporating temperature setting, it is necessary to change the setting of the dip switch on the outdoor unit.
*2) When the difference between the indoor unit air-intake temperature and the actual temperature setting exceeds 1°C, the evaporating temperature based on this difference is constant.

High sensible heat

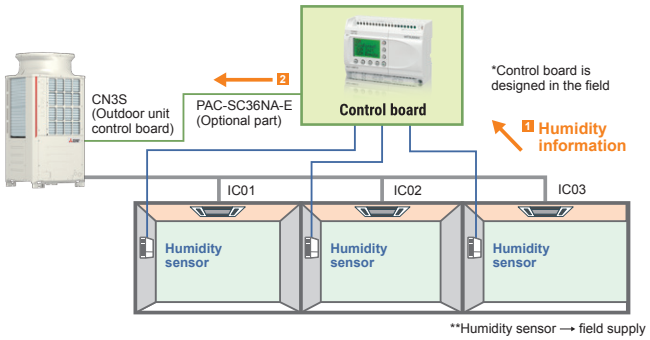
High sensible heat operation

The evaporating temperature is controlled according to room temperature and humidity, and refrigerant pressure.



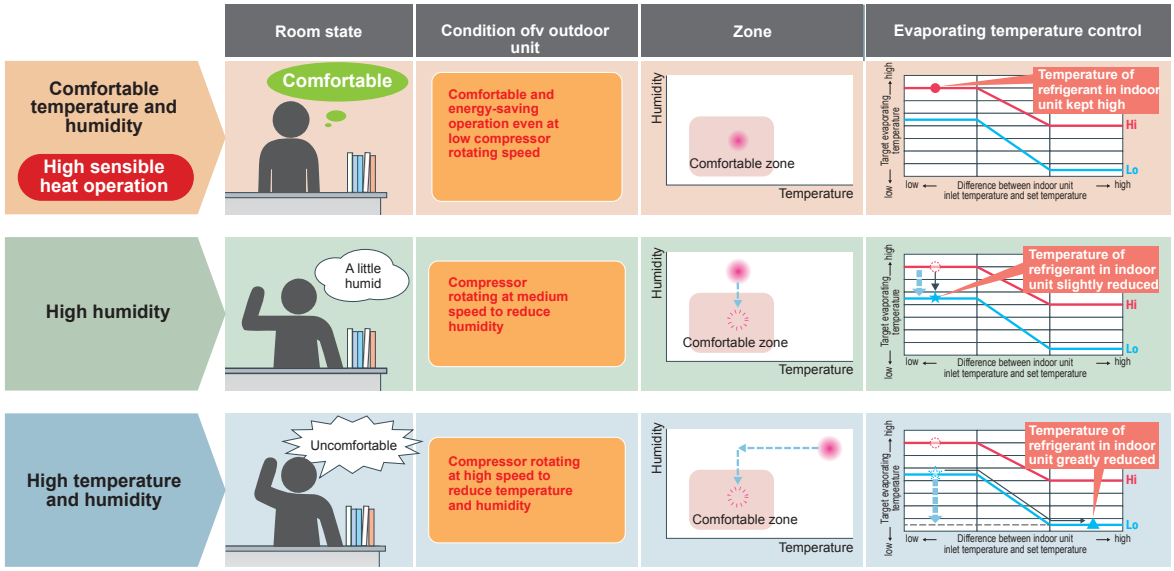
With high sensible heat operation mode activated, air conditioners consume less energy, thereby realizing cost savings. If a locally-procured humidity sensor is installed, the evaporating temperature of the outdoor unit can be controlled optimally as shown below according to the difference between the indoor unit inlet temperature and set temperature. A wide range of temperature settings are available, from a low evaporating temperature close to the temperature for normal operation to a high evaporating temperature to realize energy savings.

LOCALLY-PROCURED HUMIDITY SENSOR INSTALLATION IMAGE



1 Humidity information is sent to the control board.
2 The control board judges the humidity information, and sends a HIGH/LOW signal to the outdoor unit through CN3S. The outdoor unit shifts the evaporating temperature depending on the information from the control board.

TEMPERATURE AND HUMIDITY CONDITIONS

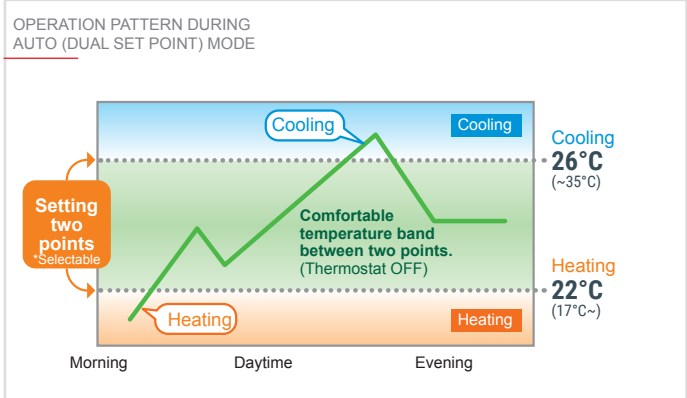


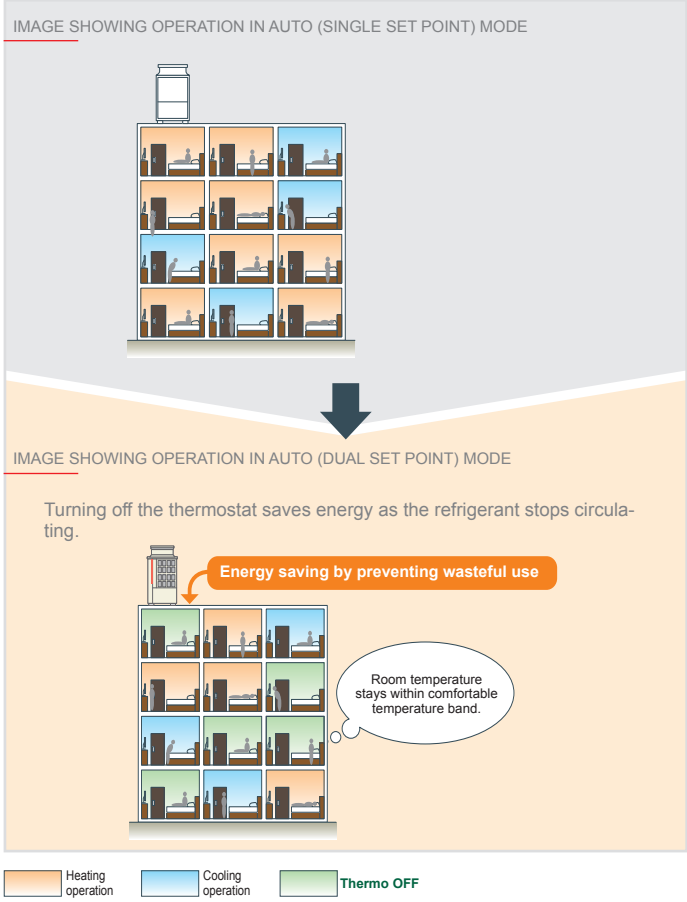
Dual Set Point

Normally, the desired room temperature is set to the same value for cooling and heating. However, the dual set point function makes it possible to set different temperatures for cooling and heating. When operation switches from cooling to heating or vice versa, the preset temperature changes accordingly.

Setting dual set points for the Auto mode on R2 and WR2 helps improve energy efficiency, compared to setting a single set point.

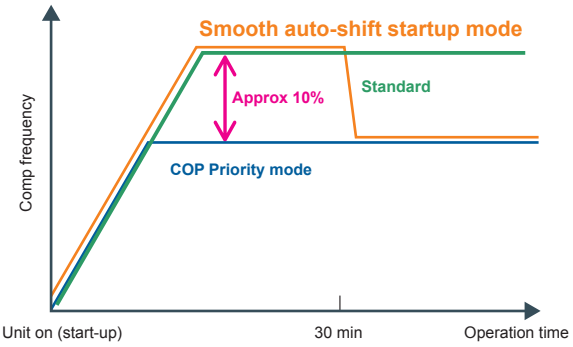
When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, the indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range. The outdoor unit does not operate in the dead band defined by two temperature points where the thermostat is off. This cuts down on unnecessary operation of the air conditioning system.





Smooth auto-shift startup mode

Smooth auto-shift startup mode, a new operation mode on the outdoor unit, can now be selected in addition to the conventional COP Priority and Capacity Priority modes. In order to heat the room faster, Capacity Priority mode runs for 30 minutes when heating operation starts. The unit then switches to COP Priority mode to increase energy-saving efficiency. This enables both improved comfort and energy savings.



Compressor: new induction heating technology

The Y Line and R2 Line outdoor units employ a pre-heating system for the scroll compressor based on induction technology. This solution is used to warm the compressor housing to minimise energy absorption in stand-by state. Yet another solution contributing to reducing energy consumption.

Installation and maintenance

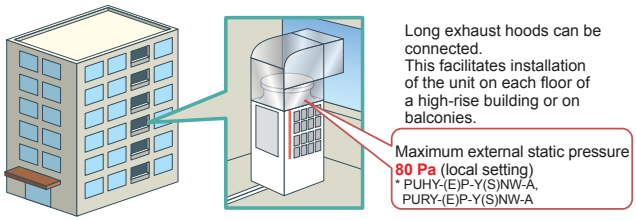
R410A R407C R22

Multi-refrigerant

The indoor units of VRF CITY MULTI systems are the first and only products on the market with multi-refrigerant capability. These units can operate with R22, R407C and R410A systems with no loss in performance, irrespective of the different pipe sizes.This allows unparalleled freedom for installation, as well as offering total reverse compatibility in the event of replacing indoor units with an R22 or R407C VRF CITY MULTI system.

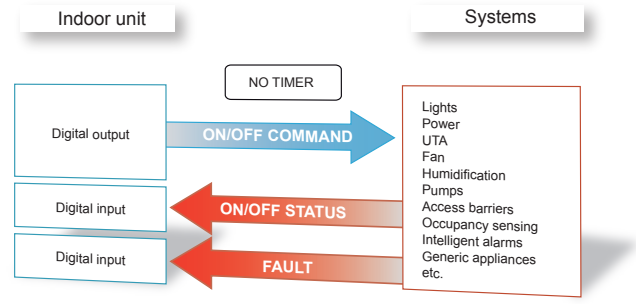
80Pa Selectable external static pressure of the outdoor unit

The static pressure specification of the outdoor unit can be selected (0, 30, 60, or 80 Pa). This facilitates installation of the unit on each floor of a high-rise building or on balconies.
* The static pressure that can be set varies depending on the model.



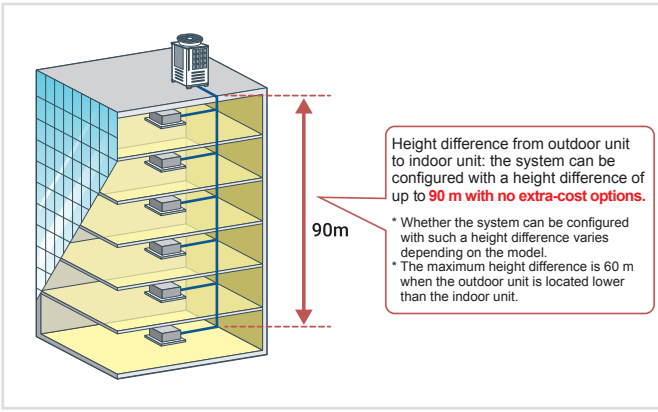
Intelligent Terminal Boards

Intelligent indoor unit terminal boards are a unique feature of Mitsubishi Electric VRF systems.
These intelligent terminal boards make it possible to use the air conditioning system and the M-NET communication network, via the indoor units, as a vehicle for collecting, transferring and monitoring field signals from generic appliances such as lighting, power, access management, intelligent alarm systems etc.
Using the intelligent terminal boards of the indoor units together with the existing infrastructure drastically reduces the number of cables needed to collect these field signals and the amount of labour required to route the cables to the centralized units.
Typically, each indoor unit supports the following signals and functions:



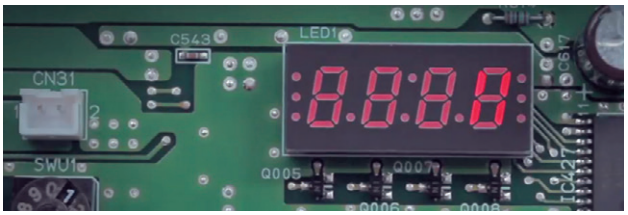
90m Usable in an application with a large vertical separation of up to 90 meters

A height difference of up to 90 m from the outdoor unit to the indoor unit can be supported with no extra-cost options.
This increases design flexibility and facilitates installation of these units even in high-rise buildings.



Self-diagnosis of VRF CITY MULTI system

For even simpler maintenance, CITY MULTI systems have a self-diagnostic function which is capable of communicating malfunctions on different levels using fault codes. With the special Maintenance Tool software developed by Mitsubishi Electric, the user can connect to any point in the transmission line to acquire all technical operating information interactively.



USB Downloading operating data via USB

Operation data was retrieved from conventional models using the maintenance tool. On the new model, the data can be retrieved quickly via USB*1. It is unnecessary to carry the personal computer in which the maintenance tool has been installed, reducing field operation time and improving convenience. Software can be rewritten via USB, while data for up to 4 days and the 5 minutes after an error has occurred can be stored in the the USB memory device*2.

*1 In the case of OC-IC maximum configuration
*2 USB memory devices conforming to USB2.0 can be used.

Remote monitoring and control systems

	3D Tablet Controller	MELCloud CITY MULTI	RMI
Group/Individual simplified management*	•	•	•
Available for Smartphone and Tablet	•	•	•
Dedicated App		•	•
User restrictions	•	•	•
Outside the building (Cloud)		•	•
Internet connection needed		•	•
WEB Server centralized control needed	•		•
Advanced energy monitoring			•
Monthly/Custom charts and reports			•
Multi-site management		•	•
Energy consumption apportioning			•

* For compatible product lines please refer to catalogues or contact headoffice

3D Tablet Controller

3D Tablet Controller is the new solution by Mitsubishi Electric allowing portable system management from Smartphone and Tablet **inside the building**. User configuration, with restrictions and privileges, makes it the ideal solution in those application serving different environments, such as offices or appartments.
Thanks to its simple and intuitive interface the user is able to control and monitor **air conditioning** and **hot water production** units on **mobile device**, just as easily as he would on a traditional remote control. This is possible thanks to WEB Server 3D centralized control installed on site, connected to the building Wi-Fi router.

MELCloud

- Cloud remote **monitoring and control** system.
- Born for residential aplications, it's now being expanded to VRF CITY MULTI.
- **Complete and intuitive** solution with all main control and monitoring functions.
- Does not require WEB Server 3D centralized control (AE-200, EW-50).

RMI

- Cloud remote monitoring and control system **for professional use**.
- Allows all main remote control and monitoring functions.
- **Advanced energy monitoring** features are available, such as hourly cunsumption view, custom charts and data collection and display.
- Geo-localized **multi-site** management.
- **Multi-user** management for centralized systems.
- Energy **consumption apportioning**.

Mitsubishi Electric for sustainability

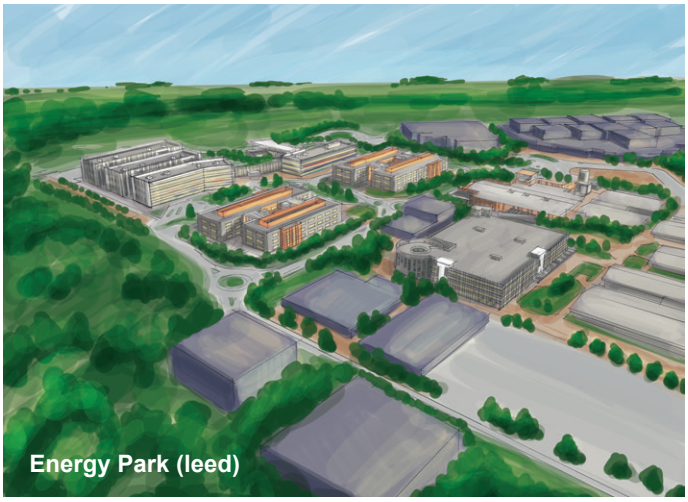
Thanks to our network of qualified professionals, we can contribute to obtain BREEAM and LEED certifications during the design stage.

Environmental sustainability

CITY MULTI

Our sustainable solutions will help you improve your BREEAM and LEED rating. We at Mitsubishi Electric have carried out BREEM- and LEED-certified projects across Europe.

BREEAM® **Launched in the 1990s, BREEAM is one of the best-known tools to assess and certify the sustainability performance of a building.**
BREEAM is based on a rating that is clear and transparent for both the client and the professionals operating in the construction industry. All this has a positive impact on the activities carried out from the design stage to when the building is used.



Energy Park (leed)

The LEED certification plays a primary role in energy and environmental design. It ensures the use of efficient and sustainable resources, as well as environmentally friendly management of the building.
The assessment criteria include sustainability of the site, energy, materials and resources used, quality of the air, internal environment, design and innovation.
There are four levels of certification: Basic, Silver, Gold, and Platinum.

Gioia 22 (leed)

Ecodesign - The ErP Directive

The European ecodesign directive on energy-related products (ErP) has become even more stringent to reduce greenhouse gas emissions resulting from the construction and real estate industries, overall energy consumption, and accelerate the transformation of this market with energy-efficient products.

An air conditioning system will change the performance with the changing of the seasons. That's why it's important to calculate its seasonal energy efficiency ratio (SEER) and the seasonal coefficient of performance (SCOP).
The ecodesign directive establishes the minimum efficiency requirements and a new method for measuring performance. The directive was implemented in the EU through the EN14825 standard, which establishes the seasonal performance factors of a climate control system.

Scan the QR code
to visit the website

Visit the website
erp.mitsubishielectric.eu/erp

BIM - Building information modelling

CITY MULTI

BIM is a collaborative way of working that allows the design team to share a virtual information model of a building and analyse its life cycle from design to demolition, highlighting any criticality of the technologies used.

This approach helps increase productivity and sustainability while improving risk management and reducing waste and costs.

BIM is not a tool. It's a method for working and sharing information that requires teamwork and collaboration, from when a building is first designed and commissioned to when it's used.

BIM can include any information about the building or parts of it. Usually, the information collected is about the geographic location, geometry, properties of the materials and technical elements, execution phases, and maintenance operations.

We at Mitsubishi Electric share our BIM files through the MEP content platform.

Click this link to access our BIM library
www.mepcontent.com/en/bim-files/

Are you a designer of HVAC systems?
Then MMESD (Mitsubishi Electric System Designer) for Revit and AutoCAD is the add-on you need.

Download it now.
You can use CAD files and Mitsubishi Electric Revit families to design in BIM successfully. If you have any doubts, our video tutorials can help solve them.

Click the link
bit.ly/2OeczaB
to download the app and watch the demo

Click the link
bit.ly/2W5E0rh
to watch the video tutorials

MEP content

VRF Systems

Outdoor units

Air condensed

Water condensed

WY WR2 LINE

BC controllers for R2 lines

WCB water-refrigerant connection box

Refrigerant piping lenght

		Line	Small Y Compact LINE	Small Y LINE	Small Y High Capacity LINE	Y Ecostandard LINE
		Model	PUMY-SP-Y(V)KM	PUMY-P-Y(V)KM4(5)	PUMY P-YKM/YBM	PUHY-P-Y(S)KA
Technology		Inverter-driven compressor technology	•	•	•	•
		IH warmer				•
		Flat tube Heat exchanger				
Function	Operation mode	COP priority mode				•
		Low noise mode	• Super silent mode	•	•	50, 100%
		Auto-shift mode				
		Dual set point	•	•	•	•
	Energy efficiency control	Evaporating temperature control (Fixed temperature control irrespective of the ΔT)				+4 °C, +9°C, +14°C
		Evaporating temperature control (Automatic control shifting according to the ΔT)				4 patterns
		High sensible heat operation (during cooling)				
		Demand control	4 steps	4 steps	4 steps	12 steps
	Defrosting	Continuous heating operation				
		Pre-heat defrost				
	External static pressure	Selectable external static pressure of outdoor unit	30 Pa	0 Pa	30 Pa YBM only	0, 30, 60 Pa
	High ambient temperature	Operation at high outside temperatures	52°C	52°C	52°C	52°C
	Piping lenght flexibility	Usable in an application with a large vertical separation of up to 90 meters				
	Maintenance	Rotation control				•
		Emergency operation mode				•
		Pump down function				•
		M-Net Power	•	•	•	•
		USB Data download				

* Power supplied to the heater only for 22HP and 24HP (P550 and P600) single modules

Y Next Stage High Efficiency LINE	Y Next Stage LINE	Y High Efficiency LINE	WY LINE	R2 Next Stage LINE	R2 Next Stage High Efficiency LINE	WR2 LINE
PUHY-EP-Y(S)LM-A1(BS)	PUHY-P-Y(S)NW-A1	PUHY-EP-Y(S)NW-A1	PQHY-P-Y(S)LM-A1	PURY-P-Y(S)NW-A1	PURY-EP-Y(S)NW-A1	PQRY-P-Y(S)LM-A1
•	•	•	•	•	•	•
•	•	•	• *	•	•	• *
•		•			•	
•	•	•		•	•	
50, 100%	50, 60, 70, 85, 100%	50, 60, 70, 85, 100%	50, 100%	50, 60, 70, 85, 100%	50, 60, 70, 85, 100%	50, 100%
	•	•		•	•	
•	•	•	•	•	•	•
+6°C, +9°C , +14°C	+6°C, +9°C, +14°C	+6°C, +9°, +14°C	+6°C, +9°, +14°C	+6°C, +9°, +14°C	+6°C, +9°, +14°C	+6°C, +9°, +14°C
4 patterns	4 patterns	4 patterns	4 patterns	4 patterns	4 patterns	4 patterns
•	•	•	•	•	•	•
12 steps	12 steps	12 steps	8 steps	8 steps	8 steps	8 steps
•	•	•		•	•	
	•	•		•	•	
0, 30, 60 Pa	0, 30, 60, 80 Pa	0, 30, 60, 80 Pa		0, 30, 60, 80 Pa	0, 30, 60, 80 Pa	
52°C	52°C	52°C	-	52°C	52°C	-
•	•	•		•	•	
•	•	•	•	•	•	•
•	•	•	•	•	•	•
•	• Automatic	• Automatic	•	• Automatic	• Automatic	•
•	•	•	•	•	•	•
	•	•		•	•	

SMALL Y COMPACT LINE

OUTDOOR UNITS - PUMY-SP Y(V)KM -R1(-BS)

COMPACT SIZE AND LOW WEIGHT

MAXIMUM FLEXIBILITY OF CONNECTION THROUGH BRANCH BOX

TOP OF THE RANGE EFFICIENCY

SUPER SILENT MODE

UP TO 30 PA STATIC PRESSURE OUTDOOR FAN UNIT

FLEXIBLE PIPE CONNECTION

Compact dimensions

The SMALL Y COMPACT (PUMY-SP) delivers the power and performance of a VRF system in residential applications with a significantly smaller footprint than ever before, thanks to its new single-fan design.

PUMY-P YKM3(-BS)

Height 1,338mm

Weight 125kg

PUMY-SP Y(V)KM(-BS)

27% down

Height 981mm

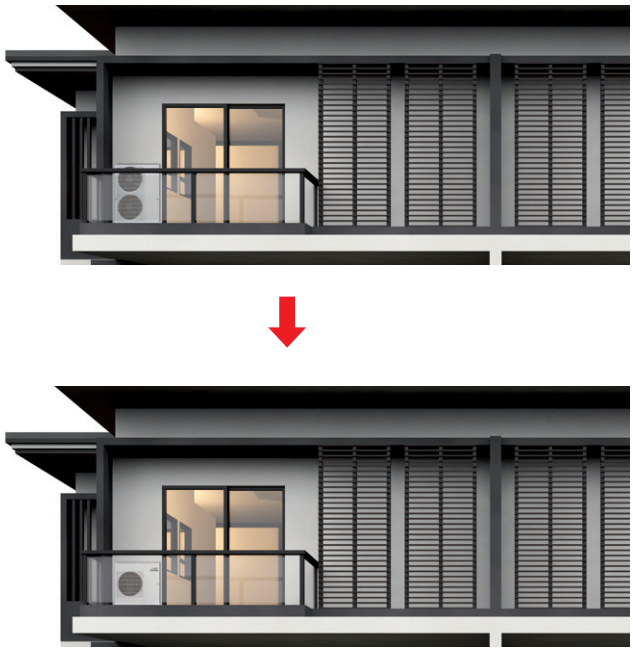
25% down

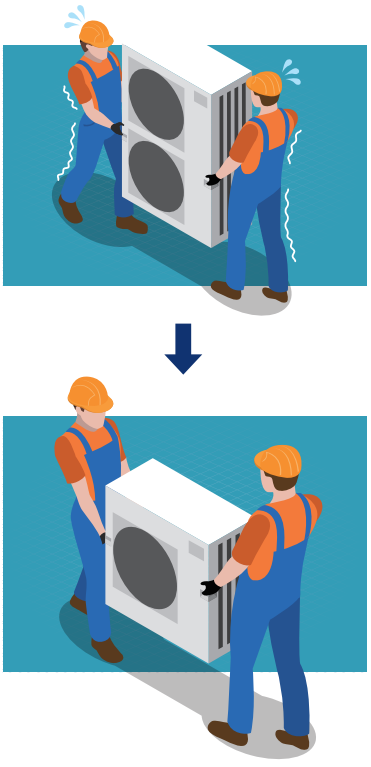
Weight 94kg

Easy installation and transport

The compact chassis of the SMALL Y COMPACT (PUMY-SP) and above all its low height (under one metre) make the machine suitable for installation on balconies. The low weight makes the unit easy to transport.

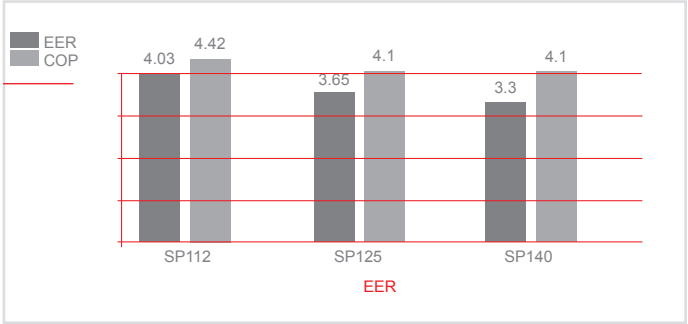
THE OUTDOOR UNIT CAN BE INSTALLED ON BALCONIES





Top of the range efficiency

Despite its compact size and low weight, the new SMALL Y COMPACT (PUMY-SP) provides top of the range efficiency. This reduces operating costs.



Super Silent Mode

The SMALL Y COMPACT (PUMY-SP) is the first model in the range that can operate in the new “Super Silent” mode, which reduces sound emission by -10dB(A). It is therefore possible to install the unit even in particularly sensitive acoustic environments.

*The optional PAC-SC36NA-E connector is required in order to activate “Super Silent” mode.
*System capacity is reduced if “Silent” or “Super Silent” mode is activated.

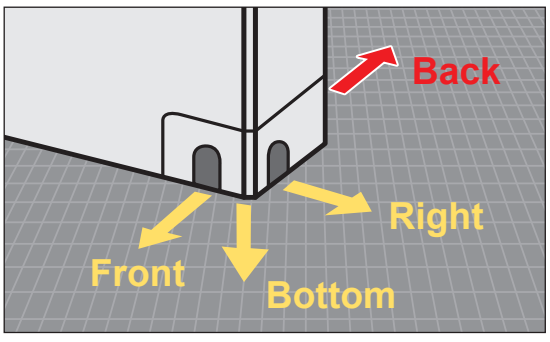
Geometric limits

The compactness of the new model SMALL Y COMPACT (PUMY-SP) does not affect the system’s flexibility, so it is still possible to have extended and capillary pipe development.

GEOMETRIC LIMITS	
	PUMY-SP112/125/140 VKM(-BS)/YKM(-BS)
Total length of pipes	120 m
Total pipe length after branch box/boxes	95 m
Maximum level difference between UI and UE (UE above)	50 m
Maximum height difference between UI and UE (UE below)	30 m

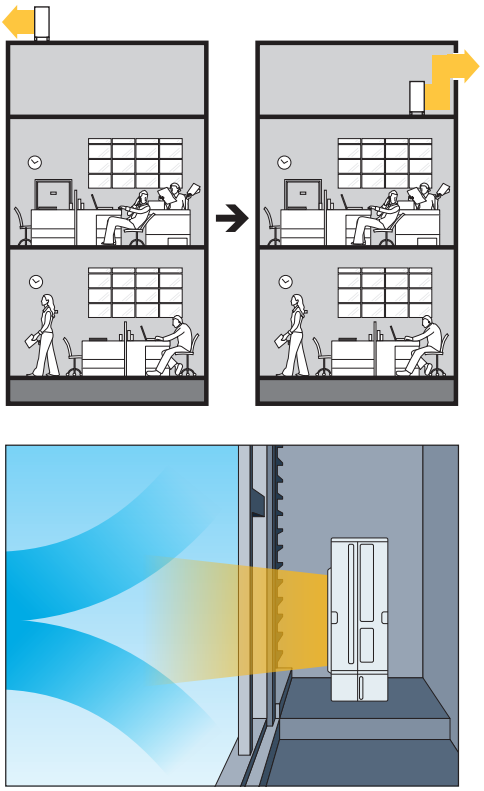
Flexible connection

The new SMALL Y COMPACT line is equipped with front, side, rear and lower refrigeration connections, making it easier to install.



Static pressure outdoor fan unit

The 30 Pa static pressure option increases flexibility in the choice of the unit’s installation point.



Connectivity

SMALL Y COMPACT (PUMY-SP) single-fan units can be connected to Residential and Commercial line indoor units by branch-box PAC-MK33(34)/53(54). It is also possible to create mixed systems with VRF indoor units and residential and commercial units. Thanks to these features, the system has essentially unlimited flexibility, serving every need.

New Branch Box (3 and 5 connections) - Total flexibility

The new Branch Boxes are designed to give the system the highest possible flexibility of configuration. It is therefore possible to create systems with CITY MULTI VRF units, consisting exclusively of Residential/ Commercial Series indoor units or mixed systems in which the two types of units coexist.

M-NET Branch Box

The new PAC-MK33(34)/53(54) branch boxes are designed for direct connection to MELANS control and supervision systems. To connect a system composed of internal units of the Residential or Commercial Line to an M-Net centraliser, it is therefore not necessary to provide a dedicated interface. Instead it is sufficient to use Branch Boxes and connect them to the communication bus consisting of a simple two-wire, non-polarised cable. In addition, the new Branch Boxes do not need to be prepared for condensate drainage.

Model	1 Branch Box		2 Branch Box	
	Via Branch Box	CITY MULTI Indoor units	Via Branch box	CITY MULTI Indoor units
PUMY-SP112	Max. 5	Max. 5	Max. 7	Max. 3
			Max. 8	Max. 2
PUMY-SP125	Max. 5	Max. 5	Max. 8	Max. 3
PUMY-SP140				

Indoor units connectable

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Wall																Floor standing			1 way cassette			4 way cassette										Ceiling concealed										Ceiling Suspeded				
			Kirigamine Style			Kirigamine Zen						Plus line												Compact 60x60				90x90																								
			MSZ-LN-VG(2)			MSZ-EF VE/VG(K)						MSZ-AP VG(K) *1						MFZ-KT			MLZ-KP VF *1			SLZ-M FA*1				PLA-M -EA / PLA-RP -EA					SEZ-M DA(L) *1					PEAD-M JA/ PEAD-RP -JAQ					PCA-M KA/ PCA -RP KAQ								
			25	35	50	18	22	25	35	42	50	15	20	25	35	42	50	25	35	50	25	35	50	15	25	35	50	35	50	60	71	100	25	35	50	60	71	50	60	71	100	35	50	60	71
8	63/162	PUMY-SP112	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
8	71/182	PUMY-SP125	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
8	80/202	PUMY-SP140	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

* [kW]x10
*1 compatibility only for R1/R2 version
COMPATIBILITY TABLE FOR MODELS PUMY SP Y(V)KM-R2

Technical specifications

MODEL				PUMY-SP112VKMR2(-BS)	PUMY-SP112YKM-R2(-BS)	PUMY-SP125VKM-R2(-BS)	PUMY-SP125YKM-R2(-BS)	PUMY-SP140VKM-R2(-BS)	PUMY-SP140YKM-R2(-BS)
HP				4.5	4.5	5.0	5.0	6.0	6.0
Power	Phases/Voltage/Freq.		V/Hz/n°	1-phase 220-240V 50Hz	3-phase 380-400-415V 50Hz	1-phase 220-240V 50Hz	3-phase 380-400-415V 50Hz	1-phase 220-240V 50Hz	3-phase 380-400-415V 50Hz
Cooling	Nominal capacity*1		kW	12.5	12.5	14.0	14.0	15.5	15.5
	Power absorption		kW	3.10	3.10	3.84	3.84	4.70	4.70
	EER			4.03	4.03	3.65	3.65	3.30	3.30
	SEER			6.76	6.76	6.74	6.74	6.49	6.49
	Operating temperature range	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor DB	°C	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0
Heating	Nominal capacity*2		kW	14.0	14.0	16.0	16.0	16.5	16.5
	Power absorption		kW	3.17	3.17	3.90	3.90	4.02	4.02
	COP			4.42	4.42	4.10	4.10	4.10	4.47
	SCOP			3.98	3.98	3.93	3.93	3.90	3.90
	Operating temperature range	Indoor WB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor DB	°C	-20.0~15.0	-20.0~15.0	-20.0~15.0	-20.0~15.0	-20.0~15.0	-20.0~15.0
Sound pressure*3	Heating/Cooling		dB(A)	52/54	52/54	53/56	53/56	54/56	54/56
Connectable indoor units				50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.
	Model/Quantity	CITY MULTI		P15~P140/9	P15~P140/9	P15~P140/10	P15~P140/10	P15~P140/12	P15~P140/12
		Branch Box		P15~P100/8	P15~P100/8	P15~P100/8	P15~P100/8	P15~P100/8	P15~P100/8
		Sistema misto		please refer to databook					
External diameter of refrigerant connectors		Liquid/Gas	mm	9.52/15.88	9.52/15.88	9.52/15.88	9.52/15.88	9.52/15.88	9.52/15.88
	External dimensions		mm	981 x 1050 x 330	981 x 1050 x 330	981 x 1050 x 330	981 x 1050 x 330	981 x 1050 x 330	981 x 1050 x 330
	Net weight		kg	93	94	93	94	93	94
	Ref Charge R410A*4/CO_2 Eq		kg	3.5 / 7.31	3.5 / 7.31	3.5 / 7.31	3.5 / 7.31	3.5 / 7.31	3.5 / 7.31

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.

SMALL Y LINE

OUTDOOR UNITS - PUMY-P Y(V)KM(-BS)

Made in Japan

MORE QUIETNESS THANKS TO THE NEW FAN

CONNECTABLE TO ecodan ATW MODULES FOR HOT WATER PRODUCTION UP TO 55°C

GEOMETRIC PIPING LIMITATIONS INCREASED

H.I.C. CIRCUIT (HEAT INTER CHARGER) FOR THE SUBCOOLING CONTROL

HEATING OPERATION RANGE EXTENDED UP TO -20°C OUTDOOR TEMPERATURE

TOP PERFORMANCE AND COP> 4 ON THE ENTIRE RANGE

POWER RANGE 4-5-6 HP THREE-PHASE AND SINGLE SIZE

NEW CHASSIS WITH INCREASED HEAT EXCHANGE SURFACE

INCREASED RELIABILITY

CONNECTABLE TO RESIDENTIAL AND COMMERCIAL INDOOR UNITS BY LEV-KIT AND BRANCH BOX

NATIVE REPLACE TECHNOLOGY FUNCTION FOR THE REPLACEMENT OF R22 SYSTEMS

New PUMY Y(V)KM 4(5) - The smallest, but with all the technology and efficiency of our bigger units

The SMALL Y (PUMY) series of outdoor units by Mitsubishi Electric, which now offers 7 different variants (with single and three-phase 4.5, 5 and 6 HP versions and a three-phase 8 HP version), is the ideal solution for large homes and medium-sized offices. These outdoor units may be connected to up to 12 indoor units of different type and power rating. This system offers exceptional savings in operating costs and is suitable for both residential and commercial applications.

Class-beating energy efficiency

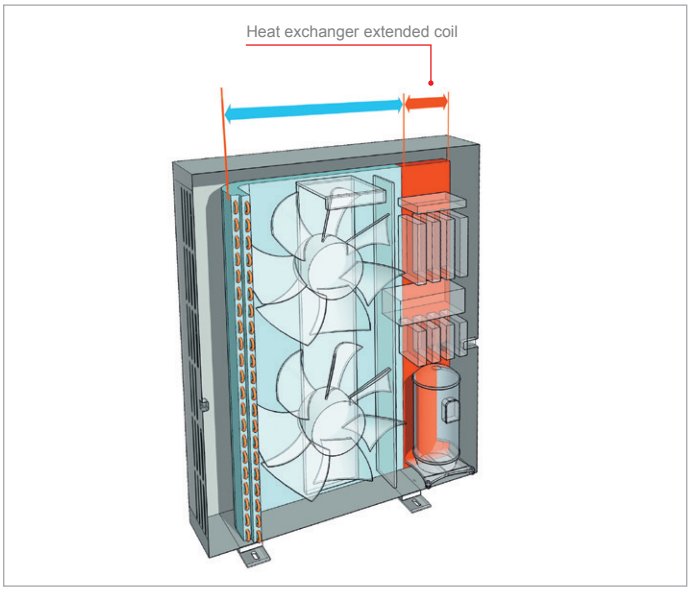
The new SMALL Y (PUMY) series has been designed to offer extraordinary levels of energy efficiency in both summer (EER) and winter (COP) operation. The entire range scores **COP values above 4**, making these units usable even in regions where legislation sets more restrictive performance limitations.

Total comfort. Even at -20°C

The new SMALL Y (PUMY) series is now capable of operating in heating mode over an even broader temperature range (from -20 to +15 °C).

New chassis with larger heat exchange surface area

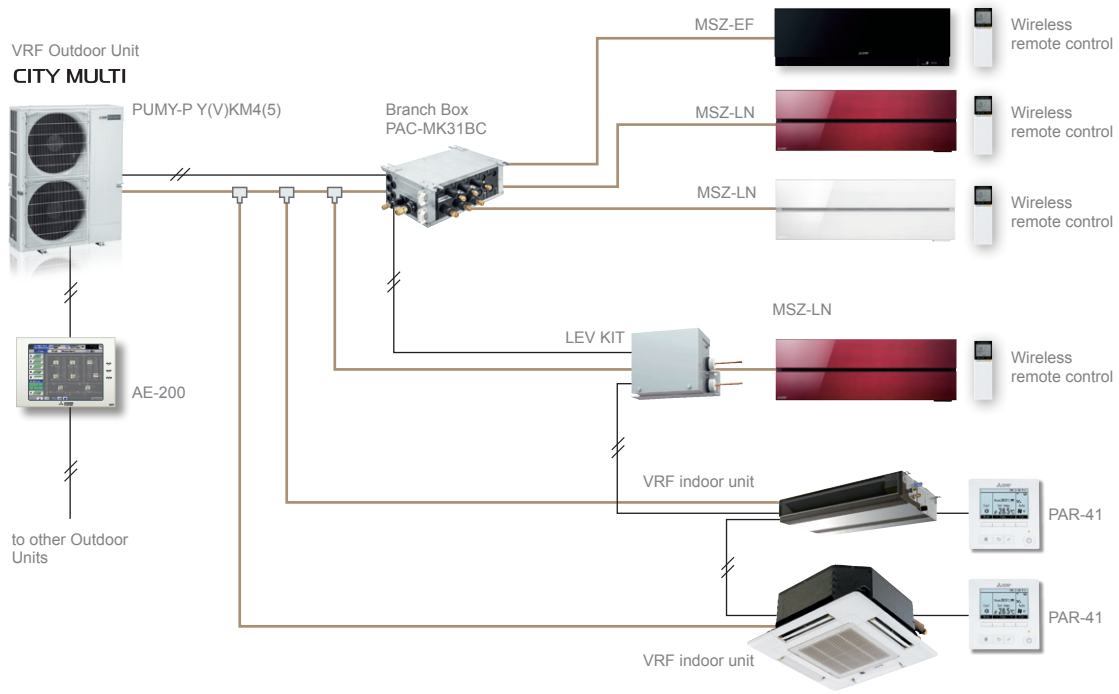
The new design of the SMALL Y (PUMY) series has made it possible to use a direct expansion coil with greater heat exchange surface area and density. Together with the introduction of the **Heat Inter Charger** overcooling circuit – a technological solution now appearing for the first time in units of this series – these improvements ensure superlative performance and extraordinary energy efficiency in cooling mode. The flat fin configuration of the coil and special Blue Fin treatment protect the coil itself against corrosion, ensuring that the unit continues to function with the same outstanding thermal exchange efficiency and performance over time.



The power of a VRF, the elegance of a residential Multi-Split

With the **LEV KIT** and the new dedicated **Branch Box** (available as 3 and 5 connection versions), the outdoor units of the Small Y series can now be connected to the entire range of **residential and commercial** indoor units, with looks that are perfectly suited to applications (such as residential buildings and hotels) where design and elegance are decisive factors in the choice of indoor units.

THE POWER OF A VRF, THE ELEGANCE OF A RESIDENTIAL MULTI-SPLIT



New Branch Boxes (3 or 5 connections) – Total flexibility

The new Branch Boxes are designed to offer the greatest configuration flexibility possible for the system. This makes it possible to create systems consisting entirely of CITY MULTI VRF units, systems with Residential/ Commercial series indoor units only, or mixed systems with both types of unit.

Model	1 Branch Box		2 Branch Box	
	Branch Box ways	CITY MULTI Indoor units	Branch Box ways	CITY MULTI Indoor units
PUMY-P112	Max. 5	Max. 5	Max. 7	Max. 3
			Max. 8	Max. 2
PUMY-P125	Max. 5	Max. 5	Max. 8	Max. 3
PUMY-P140				

Total flexibility for installation and maintenance

With increased geometric limits for piping, the SMALL Y (PUMY) series offers unparalleled flexibility for installation.

INCREASED GEOMETRICAL LIMITS FOR PIPING	
	PUMY P112-P125-P140 Y(V)KM4
Total effective length	300 m
Effective length of a single circuit	150 m
Maximum vertical difference between indoor units	15 m
"Maximum vertical difference between indoor and outdoor units (with outdoor unit in lower position)"	40 m

Indoor units connectable

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Wall Mounted																						
			Kirigamine Style			Kirigamine Zen						Plus line													
			MSZ-LN-VG(2)			MSZ-EF VG(K)/_VE2/3						MSZ-SF VE3						MSZ-AP VG(K)						MSZ-GF VE	
			25	35	50	18	22	25	35	42	50	15	20	25	35	42	50	15	20	25	35	42	50	60	71
8	30/162	PUMY-P112	•	•	•	•	•	•	•	•	•	•*1	•*1	•	•	•	•	•*2	•*2	•	•	•	•	•	•
	30/182	PUMY-P125	•	•	•	•	•	•	•	•	•	•*1	•*1	•	•	•	•	•	•	•	•	•	•	•	•
	30/202	PUMY-P140	•	•	•	•	•	•	•	•	•	•*1	•*1	•	•	•	•	•	•	•	•	•	•	•	•

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Floor Standing						1 way cassette			4 way cassette									Ceiling Concealed									Ceiling Suspeded				
			Plus line									60x60 (Compact)				90x90 (Standard)					Low static pressure					Middle static pressure								
			MFZ-KJ VE (2)			MFZ-KT VG			MLZ-KP VF			SLZ-M FA				PLA-M- EA /PLA -RP-EA					SEZ-M DA (L)					PEAD-M JA / PEAD-RP JAQ				PCA-M KA/ PCA-RP KAQ				
			25	35	50	25	35	50	25	35	50	15	25	35	50	35	50	60	71	100	25	35	50	60	71	50	60	71	100	35	50	60	71	100
8	30/162	PUMY-P112	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	30/182	PUMY-P125	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	30/202	PUMY-P140	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

* [kW]x10, **COMPATIBILITY TABLE FOR MODELS PUMY P VKM5; PUMY P112-140 Y(V) KM4 R1(2);**
*1 ONLY MSZ-SF 15/20 VA
*2 ONLY MSZ-AP 15/20 VF
ONLY for R2 model : MSZ-LN VG2 ; MSZ-EF·VGK, MSZ-AP·VGK; MFZ -KT VG

Mixed systems

SMALL Y series (PUMY) sizes 4.5-5-6 HP can be connected to **Ecodan HYDROBOX and HYDROTANK**, allowing mixed systems (domestic hot water, radiant panels or air heating and air cooling). Thanks to this feature the system can produce **hot water** up to **55°C**.

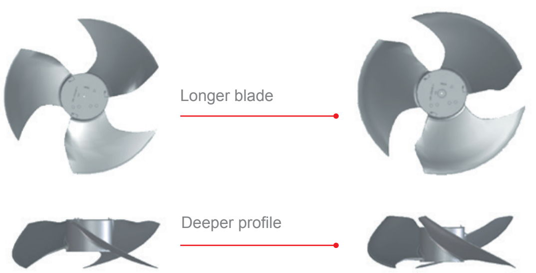
Unparalleled silence

The new fans cut through the air more effectively and minimise turbulence, for superlative static overpressure with **minimum noise impact**. These fans generate a **10% higher outdoor air flow than the previous version** while operating at the same noise levels. Small Y (PUMY) is also capable of operating in "low noise" mode, reducing sound pressure levels by 2 dB. By connecting an external timer or switch to the fan, this mode can be set for specific time brackets during the day.

New fan

Diameter increased from 490 mm to 550 mm.
The new fan has longer, differently shaped blades to direct air more effectively, reduce turbulence and increase efficiency.

NEW FAN



New PUMY Y(V)KM with Replace Technology

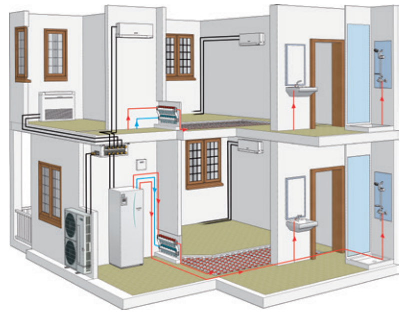
The EU regulation 2037/2000/EC **has banned the use of virgin HCFC refrigerants (R22)** since 1/1/2010. As a result, in the event of a fault or even just a refrigerant leak in an air conditioning system using R22, it is no longer possible to recharge the system. With small to medium-sized installations in particular, the most cost effective solution is to replace the entire air conditioning system. This is because of the following reasons:

- New generation outdoor units with R410A are much more efficient, with lower electric power consumption;
- They are quieter and offer more effective air filtration;
- Taking advantage of tax rebates offered for replacing winter air conditioning systems will minimise the time necessary to recoup the initial outlay.

The main problem in replacing an existing air conditioner using R22 fluid with a system using new R410A refrigerant is posed by the residue of chlorine and mineral oils remaining in the existing piping onto which the air conditioner system containing R22 was connected. This residue is extremely harmful for the new air conditioner, and unless the circuit is flushed out extremely thoroughly, may degrade the new oil and/or cause obstructions in the refrigerant circuit and, as a result, lead to system malfunctions. Moreover, the diameters and thickness of the existing piping may not be compatible with the new units.

The **SMALL Y (PUMY)** Lines of outdoor units features **Mitsubishi Electric Replace Technology**, which allows the **existing piping to**

ECODAN MULTI



LEGEND
Refrigerant
Water

be used without modification, even with piping with different diameters and wall thicknesses. By using exclusive HAB oil and special low friction technology for the compressor, the majority of our air conditioners may operate with the original piping, cutting installation times and costs and material costs while minimising environmental impact.

AC PRE-HEATING compressor pre-heating system

AC pre-heating system is used for the compressor. The pre-heat routine is based on the temperature of the refrigerant and of the compressor. AC control reduces power absorption in stand-by state, increasing seasonal efficiency.

Technical specifications

MODEL				PUMY-P112VKM5(-BS)	PUMY-P125VKM5(-BS)	PUMY-P140VKM5(-BS)
HP				4.5	5.0	6.0
Power	Phases/Voltage/Freq.			Single phase 220-230-240V 50Hz		
Cooling	Nominal capacity*1		kW	12.5	14.0	15.5
	Power absorption		kW	2.79	3.46	4.52
	EER			4.48	4.05	3.43
	SEER			6.55	6.60	6.25
	Operating temperature range	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor DB	°C	-5.0~46.0	-5.0~46.0	-5.0~46.0
Heating	Nominal capacity*2		kW	14.0	16.0	18.0
	Power absorption		kW	3.04	3.74	4.47
	COP			4.61	4.28	4.03
	SCOP			4.64	4.63	4.42
	Operating temperature range	Indoor WB	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor DB	°C	-20.0~15.0	-20.0~15.0	-20.0~15.0
Sound pressure*3	Heating mode		dB(A)	51	52	53
	Cooling mode		dB(A)	49	50	51
Connectable indoor units	Total capacity			50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.
	Model/Quantity			P15~P140 / 1~9	P15~P140 / 1~10	P15~P140 / 1~12
External diameter of refrigerant connectors	Liquid		mm	9.52	9.52	9.52
	Gas		mm	15.88	15.88	15.88
Fan air flow rate			m^3/min	110	110	110
External dimensions (HxLxW)			mm	1338x1050x330	1338x1050x330	1338x1050x330
Net weight			kg	122	122	122
Ref. Charge R410A*4/CO_2 Eq			kg/Tons	4.8/10.02	4.8/10.02	4.8/10.02

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUMY-P112YKM4R2(-BS)	PUMY-P125YKM4R2(-BS)	PUMY-P140YKM4R2(-BS)
HP				4.5	5.0	6.0
Power	Phases/Voltage/Freq.			3-phase, 380-400-415V, 50Hz		
Cooling	Nominal capacity*1		kW	12.5	14.0	15.5
	Power absorption		kW	2.79	3.46	4.52
	EER			4.48	4.05	3.43
	SEER			6.55	6.60	6.25
	Operating temperature range	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor DB	°C	-5.0~46.0	-5.0~46.0	-5.0~46.0
Heating	Nominal capacity*2		kW	14.0	16.0	18.0
	Power absorption		kW	3.04	3.74	4.47
	COP			4.61	4.28	4.03
	SCOP			4.64	4.63	4.42
	Operating temperature range	Indoor WB	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor DB	°C	-20.0~15.0	-20.0~15.0	-20.0~15.0
Sound pressure*3	Heating mode		dB(A)	51	52	53
	Cooling mode		dB(A)	49	50	51
Connectable indoor units	Total capacity			50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.	50 to 130% of capacity of O.U.
	Model/Quantity			P15~P140 / 1~9	P15~P140 / 1~10	P15~P140 / 1~11
External diameter of refrigerant connectors	Liquid		mm	9.52	9.52	9.52
	Gas		mm	15.88	15.88	15.88
Fan air flow rate			m^3/min	110	110	110
External dimensions (HxLxW)			mm	1338x1050x330	1338x1050x330	1338x1050x330
Net weight			kg	125	125	125
Ref. Charge R410A*4/CO_2 Eq			kg/Tons	4.8/10.02	4.8/10.02	4.8/10.02

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

SMALL Y (HIGH CAPACITY) LINE

OUTDOOR UNITS - PUMY P200 YKM2 (-BS) / PUMY P250/300 YBM (BS)

MORE QUIETNESS THANKS TO THE NEW FAN

GEOMETRIC PIPING LIMITATIONS INCREASED

H.I.C. CIRCUIT (HEAT INTER CHARGER) FOR THE SUBCOOLING CONTROL

HEATING OPERATION RANGE EXTENDED UP TO -20°C OUTDOOR TEMPERATURE

TOP PERFORMANCE AND COP> 4

POWER RANGE EXTENDED WITH THE INTRODUCTION OF THE NEW 8,10,12 HP THREE-PHASE SIZE

NEW CHASSIS WITH INCREASED HEAT EXCHANGE SURFACE

INCREASED RELIABILITY

CONNECTABLE TO RESIDENTIAL AND COMMERCIAL INDOOR UNITS BY LEV-KIT AND BRANCH BOX

NATIVE REPLACE TECHNOLOGY FUNCTION FOR THE REPLACEMENT OF R22 SYSTEMS

The power and performance of a VRF with the compact dimensions of a multisplit

The new PUMY-P200YKM 8HP is the ideal solution for all applications where there can be no compromise in efficiency, power and installation flexibility – even where installation space is limited.

The power of a VRF, the elegance of a residential Multi-Split

With the use of the **LEV KIT** and **Branch Box** (available as 3 and 5 connection versions) the outdoor units of the Small Y series in **8 HP** size can now be connected to the entire range of indoor units of the **residential and commercial series**, with looks that are perfectly suited to applications (residential and hotel buildings) where design and elegance are decisive factors in the choice of indoor units.

Branch Box (3-5 ports) - Total flexibility

New Branch Box grants high flexibility in system design and indoor unit choice. It is possible to connect Residential/Commercial units and/or CITY MULTI VRF units, realizing mixed systems with both types.
Note: PUMY-P200YKM2 to Branch Box connection is **only available in AtA configuration.**

Model	1 Branch Box		2 Branch Box	
	Branch Box ways	CITY MULTI Indoor Units	Branch Box ways	CITY MULTI Indoor Units
PUMY-P200	Max. 5	Max. 5	Max. 8	Max. 3

*The maximum total capacity of the units that can be connected to each branch box is 20.2kW

Indoor units connectable

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Wall Mounted																						
			Kirigamine Style			Kirigamine Zen						Plus line													
			MSZ-LN-VG(2)			MSZ-EF VG(K)						MSZ-SF						MSZ-AP VG(K)						MSZ-GF VE	
			25	35	50	18	22	25	35	42	50	15	20	25	35	42	50	15	20	25	35	42	50	60	71
8	112/291	PUMY-P200	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Floor Standing						1 way cassette			4 way cassette									
			Plus line									60x60 (Compact)				90x90 (Standard)					
			MFZ-KJ VE (2)			MFZ-KT VG			MLZ-KP VF			SLZ-M FA /VA2				PLA-M EA					
			25	35	50	25	35	50	25	35	50	15	25	35	50	35	50	60	71	100	
8	112/291	PUMY-P200	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Ceiling Concealed									Ceiling Suspeded				
			Low static pressure					Middle static pressure								
			SEZ-M DA (L)					PEAD-M JA				PCA-M KA				
			25	35	50	60	71	50	60	71	100	35	50	60	71	100
8	112/291	PUMY-P200	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* [kW]x10, **COMPATIBILITY TABLE FOR MODELS PUMY P200 YKM2_ R1(2)**
Note1: Only for R1/R2 models: MSZ-EF·VG, MSZ-AP·VG, PLA-M·EA
Note2 :Only for R2 models: MSZ-LN·VG2, MSZ-AP·VGK, MSZ-EF·VGK, MFZ-KT·VG

Technical specifications

MODEL					PUMY-P200YKM2R2(-BS)
HP					8
Power	Phases/Voltage/Freq.				3-phase, 380-400-415V, 50Hz
Cooling	Capacity*1			kW	22.4
	Power input			kW	6.05
	EER				3.70
	SEER				5.45
	Temperature operating field	Indoor WB		°C	15.0~24.0
		Outdoor DB		°C	-5.0~52.0 *2*3
Heating	Capacity*4			kW	25.0
	Power input			kW	5.84
	COP				4.28
	SCOP				4.21
	Temperature operating field	Indoor WB		°C	15.0~27.0
		Outdoor DB		°C	-20.0~15.0
Sound power level*5				dB(A)	56/61
Connectable indoor units					50~130% of kW outdoor unit capacity
	Model/ Quantity	CITY MULTI			P15-P200/12
		Branch Box			kW index: 15-100/8*6
		Mixed system	1 Branch Box	CITY MULTI	P15-P200/5
				Branch Box	kW index: 15-100/5
			2 Branch Box	CITY MULTI	P15-P200/3
				Branch Box	kW index: 15-100/8
Ø Ref. piping	Liquid/Gas			mm	9.52/19.05
External dimensions (HxLxW)				mm	1338 x 1050 x 330
Net weight				kg	141
Ref. Charge R410A*7/ CO_2 Eq				kg/Tons	7.3/15.24

*1 Nominal cooling conditions.: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m., vertical difference 0 m.
*2 10 to 52:, when connecting following models: PKFY-P15/20/25VBM,
PKFY-P10/15/20/25/32VLM. PFFY-P20/25/32VLEM, PFFY-P20/25/32VLRM(M), PFFY-P20/25/32VKM, PFFY-P20/25/32VCM, and M series, S series, and P series type indoor unit.
*3 15.0~52.0 when using accessory PAC-SH95AG-E. Not available when connecting units listed in*2
*4 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*5 Values measured in anechoic chamber (Cooling/Heating)
*6 At least 2 IU connected to Branch Box.
*7 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

The power and performance of a VRF with the compact dimensions of a multisplit

The new PUMY-P250/300 YKB 10-12 HP is the ideal solution for all applications where there can be no compromise in efficiency, power and installation flexibility – even where installation space is limited.

Branch Box (3-5 ports) - Total flexibility

New Branch Box grants high flexibility in system design and indoor unit choice. It is possible to connect Residential/Commercial units and/or CITY MULTI VRF units, realizing mixed systems with both types.
Note: PUMY-P250/300 YBM to Branch Box connection is **only available in AtA configuration.**

Model	1 Branch Box		2 Branch Box		3 Branch Box	
	Branch Box ways	CITY MULTI Indoor Units	Branch Box ways	CITY MULTI Indoor Units	Branch Box ways	CITY MULTI Indoor Units
PUMY-P250	Max. 5	Max. 25	Max. 10	Max. 23	Max. 12	Max. 22
PUMY-P300	Max. 5	Max. 25	Max. 10	Max. 23	Max. 12	Max. 22

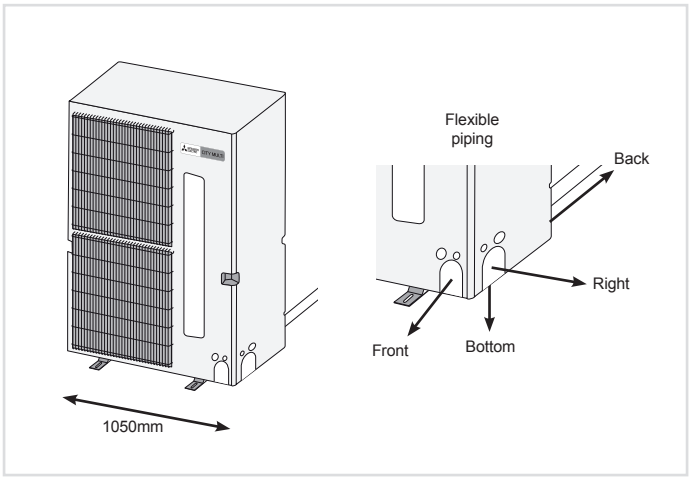
*The maximum total capacity of the units that can be connected to each branch box is 20.2kW

The power of a VRF, the elegance of a residential Multi-Split

With the use of the **LEV KIT** and **Branch Box** (available as 3 and 5 connection versions) the outdoor units of the Small Y series in **10/12 HP** size can now be connected to the entire range of indoor units of the **residential and commercial series**, with looks that are perfectly suited to applications (residential and hotel buildings) where design and elegance are decisive factors in the choice of indoor units.

Installation flexibility

The 10 and 12HP models introduce further installation flexibility by ensuring connection of the refrigerant also from the rear of the unit, making these models adaptable to all application requirements.

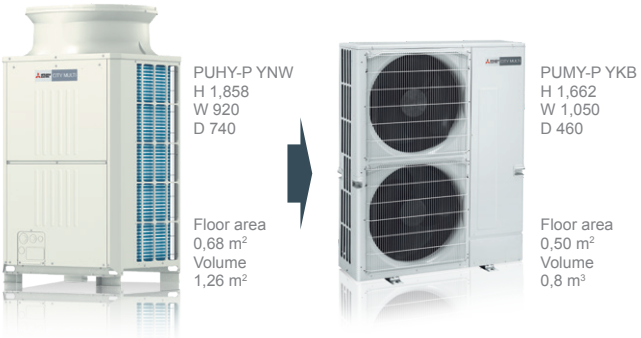


The new 10 and 12HP models

The SMALL Y Line gets enriched by the addition of new models (10 and 12HP) in response to the increasing market need for a compact machine that covers bigger capacity.
The PUMY P250/300 YBM outdoor units are available in a single version with three-phase power supply, double fan structure, side-flow and with different sizes depending on the model. Also available in -BS version, with anti-saline treatment.

Side Flow vs Top Flow

Side-flow outdoor units have a smaller footprint and volume than Top-flow units.



Indoor units connectable

Nr. IU Connectable	Min/Max connectable capacity*	MODEL	Wall Mounted																Floor Standing		
			Kirigamine Style			Kirigamine Zen						Plus line									
			MSZ-LN- VG(2)			MSZ-EF VG(K)						MSZ-AP VG(K)							MFZ-KT VG		
			25	35	50	18	22	25	35	42	50	15	20	25	35	42	50		25	35	50
12	140/364	PUMY-P250	●	●	●	●	●	●	●	●		●	●						●	●	●
	168/435	PUMY-P300	●	●	●	●	●	●	●	●		●	●						●	●	●

* [kW]x10, **COMPATIBILITY TABLE FOR MODELS PUMY P250/300 YBM**

Technical specifications

MODEL				PUMY-P250YBM(-BS)	PUMY-P300YBM(-BS)
HP				10	12
Power	Phases/Voltage/Freq.			3-phase, 380-400-415V, 50Hz	3-phase, 380-400-415V, 50Hz
Cooling	Capacity*1		kW	28	33,5
	Power input		kW	8,21	10,12
	EER			3.41	3.31
	SEER			6.28	6.28
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0
		Outdoor DB	°C	-5.0~52.0 *3*4	-5.0~52.0 *3*4
Heating	Capacity*2		kW	31,5	37,5
	Power input		kW	7,41	9,12
	COP			4.25	4.11
	SCOP			4.22	4.22
	Temperature operating field	Indoor WB	°C	15.0~27.0	15.0~27.0
		Outdoor DB	°C	-20.0~15.0	-20.0~15.0
Sound power level			dB(A)	56/61	57/62
Connectable indoor units				50~130% of kW outdoor unit capacity	50~130% of kW outdoor unit capacity
	Model/ Quantity	CITY MULTI		P10-P250/30	P10-P250/30
		Branch Box		kW index: 15-50/12	kW index: 15-50/12
		Mixed system 1 Branch Box	CITY MULTI	P10-P250/25	P10-P250/25
			Branch Box	kW index: 15-50/5	kW index: 15-50/5
		Mixed system 2 Branch Box	CITY MULTI	P10-P250/23	P10-P250/23
			Branch Box	kW index: 15-50/10	kW index: 15-50/10
		Mixed system 3 Branch Box	CITY MULTI	P10-P250/22	P10-P250/22
			Branch Box	kW index: 15-50/12	kW index: 15-50/12
Ø Ref. piping	Liquid/Gas		mm	9.52/22.4*5	12.7/25.4*5
External dimensions (HxLxW)			mm	1662 x 1050 x460	1662 x 1050 x460
Net weight			kg	196	196
Ref. Charge R410A/ CO_2 Eq			kg/Tons	9.3/19,41	9.3/19,41

*1. Nominal cooling conditions (subject to ISO 15042)
Indoor: 27°CD.B/19°CW.B. (81°FD.B./66°FW.B.], Outdoor: 35°CD.B. [95°FD.B.], Pipe length: 7.5 m [24-9/16 ft.], Level difference: 0 m [0 ft.]
*2. Nominal heating conditions (subject to ISO 15042)
Indoor: 20°CD.B. [68°FD.B.], Outdoor: 7°CD.B./6°CW.B. [45°FD.B./43°FW.B.], Pipe length: 7.5 m [24-9/16 ft.], Level difference: 0 m (0 ft.]
*3. 10 to 52°C, when connecting following models: PKFY-P10/15/20/25/32VLM, PFFY-P20/25/32VKM, PFFY-P20/25/32VCM, PFFY-P20/25/32VLEM, PEFY-P63/71/80V/MA3-E; and M series type indoor unit.
*4. -15 to 52°C, when using an optional air protect guide [PAC-SK21AG-E]. However, this condition does not apply to the indoor unit listed in *3.
*5. Liquid pipe diameter: 12.7mm, when further piping length is longer than 90m, and when PEFY-P200 or P250 is connected.
It is possible to set the External static pressure to 30 Pa by Dip Switch.
Notes:
• Nominal conditions *1, *2 are subject to ISO15042
• Due to continuing improvement, above specifications may be subject to change without notice.

Y ECOSTANDARD LINE

OUTDOOR UNITS - PUHY-P Y(S)KA(-BS)

OUTDOOR UNIT OPTIMISED FOR COOLING PERFORMANCE (EER)

SINGLE MODULE SYSTEM FOR INSTALLATIONS UP TO 20HP, FOR MINIMISED SPACE USAGE AND EXTREME SIMPLICITY OF INSTALLATION

EXTENDED OPERATING RANGE IN COOLING MODE, WITH MAXIMUM TEMPERATURES UP TO 52°C

MAX SIZE UP TO 60 HP

EVAPORATING TEMPERATURE CONTROL SYSTEM (E.T.C.)

NEW FLANGED DUCT AND NEW DC INVERTER FAN MOTOR

MORE COMPACT AND LIGHTER THAN YHA OUTDOOR UNIT SERIES

CONVENTIONAL BI-METAL (COPPER/ ALUMINIUM) HEAT EXCHANGER

EXTENDED PIPING LENGHT

Technical specifications

MODEL Single				PUHY-P200YKA(-BS)	PUHY-P250YKA(-BS)	PUHY-P300YKA(-BS)	PUHY-P350YKA(-BS)	PUHY-P400YKA(-BS)	PUHY-P450YKA(-BS)	PUHY-P500YKA(-BS)
HP				8	10	12	14	16	18	20
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz						
Cooling	Capacity*1		kW	22,4	28	33,5	40	45	48	55
	Power input		kW	5,19	6,89	8,86	11,69	13,55	15,78	18,39
	EER			4,31	4,06	3,78	3,42	3,32	3,04	2,99
	SEER			7.12	7.28	6.39	6.67	6.30	6.13	6.44
	Temperature operating field	Indoor WB	°C	15~24	15~24	15~24	15~24	15~24	15~24	15~24
		Outdoor DB	°C	-5~52	-5~52	-5~52	-5~52	-5~52	-5~52	-5~52
Heating	Capacity*2		kW	22,4	28	33,5	40	45	48	55
	Power input		kW	5,05	6,33	8,11	9,61	10,92	13,33	15,71
	COP			4,43	4,42	4,13	4,16	4,12	3,6	3,5
	SCOP			4.12	3.87	3.92	3.56	3.50	3.50	3.51
	Temperature operating field	Indoor WB	°C	15~27	15~27	15~27	15~27	15~27	15~27	15~27
		Outdoor DB	°C	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5
Sound pressure level*3			dB(A)	57	58	61	61	63	63	65
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/1~17	P15~P250/1~21	P15~P250/1~26	P15~P250/1~30	P15~P250/1~34	P15~P250/1~39	P15~P250/1~43
Ø Ref. piping diameter	Liquid/Gas			9,52/22,2	9,52/22,2	9,52/22,2	9,52/28,58	12,7/28,58	15,88/28,58	15,88/28,58
External dimentions	(HxLxD)		mm	1650x920x740	1650x920x740	1650x920x740	1650x1220x740	1650x1220x740	1650x1220x740	1650x1750x740
Net weight			kg	195	195	211	256	253	253	288
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	8/16,7	8/16,7	8/16,7	11,5/24,01	11,5/24,01	11,5/24,01	11,8/24,64

Technical specifications

MODEL Double				PUHY-P550YSKA(-BS)	PUHY-P600YSKA(-BS)	PUHY-P650YSKA(-BS)	PUHY-P700YSKA(-BS)	PUHY-P750YSKA(-BS)	PUHY-P800YSKA(-BS)
HP				22	24	26	28	30	32
Modules				PUHY-P250YKA PUHY-P300YKA	PUHY-P250YKA PUHY-P350YKA	PUHY-P250YKA PUHY-P400YKA	PUHY-P250YKA PUHY-P450YKA	PUHY-P300YKA PUHY-P450YKA	PUHY-P400YKA PUHY-P400YKA
Twinning joint				CMY-Y100VBK3	CMY-Y100VBK3	CMY-Y100VBK3	CMY-Y200VBK2	CMY-Y200VBK2	CMY-Y200VBK2
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz					
Cooling	Capacity*1		kW	63	68	73	76	81,5	90
	Power input		kW	16,07	18,18	19,78	21,4	23,9	27,1
	EER			3,92	3,74	3,69	3,55	3,41	3,32
	SEER			6,67	6,79	6,75	6,14	5,70	6,44
	Temperature operating field	Indoor WB	°C	15~24	15~24	15~24	15~24	15~24	15~24
		Outdoor DB	°C	-5~52	-5~52	-5~52	-5~52	-5~52	-5~52
Heating	Capacity*2		kW	63	68	73	76	81,5	90
	Power input		kW	15,51	16,7	18,02	20	22,2	23,01
	COP			4,06	4,07	4,05	3,8	3,67	3,91
	SCOP			3,76	3,81	3,57	3,45	3,40	3,38
	Temperature operating field	Indoor WB	°C	15~27	15~27	15~27	15~27	15~27	15~27
		Outdoor DB	°C	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5
Sound pressure level*3			dB(A)	63	63	64,5	64,5	65,5	66
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/2~47	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping diameter	Liquid/Gas			15,88/28,58	15,88/28,58	15,88/28,58	19,05/34,93	19,05/34,93	19,05/34,93
External dimentions	(HxLxD)		mm	1650x920x740 1650x920x740	1650x920x740 1650x1220x740	1650x920x740 1650x1220x740	1650x920x740 1650x1220x740	1650x920x740 1650x1220x740	1650x1220x740 1650x1220x740
Net weight			kg	406	451	448	448	464	506
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	16/33,4	19,5/33,4	19,5/33,4	19,5/48,02	19,5/48,02	23/48,02

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.

Technical specifications

MODEL Double				PUHY-P850YSKA(-BS)	PUHY-P900YSKA(-BS)	PUHY-P950YSKA(-BS)	PUHY-P1000YSKA(-BS)
HP				34	36	38	40
Modules				PUHY-P400YKA PUHY-P450YKA	PUHY-P450YKA PUHY-P450YKA	PUHY-P450YKA PUHY-P500YKA	PUHY-P500YKA PUHY-P500YKA
Twinning joint				CMY-Y200VBK2	CMY-Y200VBK2	CMY-Y200VBK2	CMY-Y200VBK2
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz			
Cooling	Capacity*1		kW	93	96	103	110
	Power input		kW	29,24	31,57	34,21	36,78
	EER			3,18	3,04	3,01	2,99
	SEER			6,14	5,98	6,21	6,63
	Temperature operating field	Indoor WB	°C	15~24	15~24	15~24	15~24
		Outdoor DB	°C	-5~52	-5~52	-5~52	-5~52
Heating	Capacity*2		kW	93	96	103	110
	Power input		kW	25,4	28,07	30,56	33,13
	COP			3,66	3,42	3,37	3,32
	SCOP			3,40	3,39	3,61	3,61
	Temperature operating field	Indoor WB	°C	15~27	15~27	15~27	15~27
		Outdoor DB	°C	-20~15,5	-20~15,5	-20~15,5	-20~15,5
Sound pressure level*3			dB(A)	66	66	67,5	68
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping diameter	Liquid/Gas			19,05/41,28	19,05/41,28	19,05/41,28	19,05/41,28
External dimentions	(HxLxD)		mm	1650x1220x740 1650x1220x740	1650x1220x740 1650x1220x740	1650x1220x740 1650x1750x740	1650x1750x740 1650x1750x740
Net weight			kg	506	506	541	576
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	23/48,02	23/48,02	23,3/48,65	23,6/49,28

Technical specifications

MODEL Triple				PUHY-P1050YSKA(-BS)	PUHY-P1100YSKA(-BS)	PUHY-P1150YSKA(-BS)	PUHY-P1200YSKA(-BS)	PUHY-P1250YSKA(-BS)	PUHY-P1300YSKA(-BS)
HP				42	44	46	48	50	52
Modules				PUHY-P300YKA PUHY-P300YKA PUHY-P450YKA	PUHY-P300YKA PUHY-P350YKA PUHY-P450YKA	PUHY-P350YKA PUHY-P400YKA PUHY-P400YKA	PUHY-P400YKA PUHY-P400YKA PUHY-P400YKA	PUHY-P400YKA PUHY-P400YKA PUHY-P450YKA	PUHY-P400YKA PUHY-P450YKA PUHY-P450YKA
Twinning joint				CMY-Y300VBK3	CMY-Y300VBK3	CMY-Y300VBK3	CMY-Y300VBK3	CMY-Y300VBK3	CMY-Y300VBK3
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz					
Cooling	Capacity*1		kW	115	121,5	130	135	138	141
	Power input		kW	32,57	35,63	38,8	40,66	43,12	45,77
	EER			3,53	3,41	3,35	3,32	3,2	3,08
	SEER			5,96	5,97	6,41	6,50	6,41	6,02
	Temperature operating field	Indoor WB	°C	15~24	15~24	15~24	15~24	15~24	15~24
		Outdoor DB	°C	-5~52	-5~52	-5~52	-5~52	-5~52	-5~52
Heating	Capacity*2		kW	115	121,5	130	135	138	141
	Power input		kW	31,5	33,8	35,51	37,7	40,35	42,98
	COP			3,65	3,59	3,66	3,58	3,42	3,28
	SCOP			3,47	3,42	3,42	3,41	3,40	3,40
	Temperature operating field	Indoor WB	°C	15~27	15~27	15~27	15~27	15~27	15~27
		Outdoor DB	°C	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5	-20~15,5
Sound pressure level*3			dB(A)	66,5	66,5	67,5	68	68	68
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping diameter	Liquid/Gas			19,05/41,28	19,05/41,28	19,05/41,28	19,05/41,28	19,05/41,28	19,05/41,28
External dimentions	(HxLxD)		mm	1650x920x740 1650x920x740 1650x1220x740	1650x920x740 1650x1220x740 1650x1220x740	1650x1220x740 1650x1220x740 1650x1220x740	1650x1220x740 1650x1220x740 1650x1220x740	1650x1220x740 1650x1220x740 1650x1220x740	1650x1220x740 1650x1220x740 1650x1220x740
Net weight			kg	675	720	762	759	759	759
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	27/57,41	31/64,72	34,5/72,03	34,5/72,03	34,5/72,03	34,5/72,03

Technical specifications

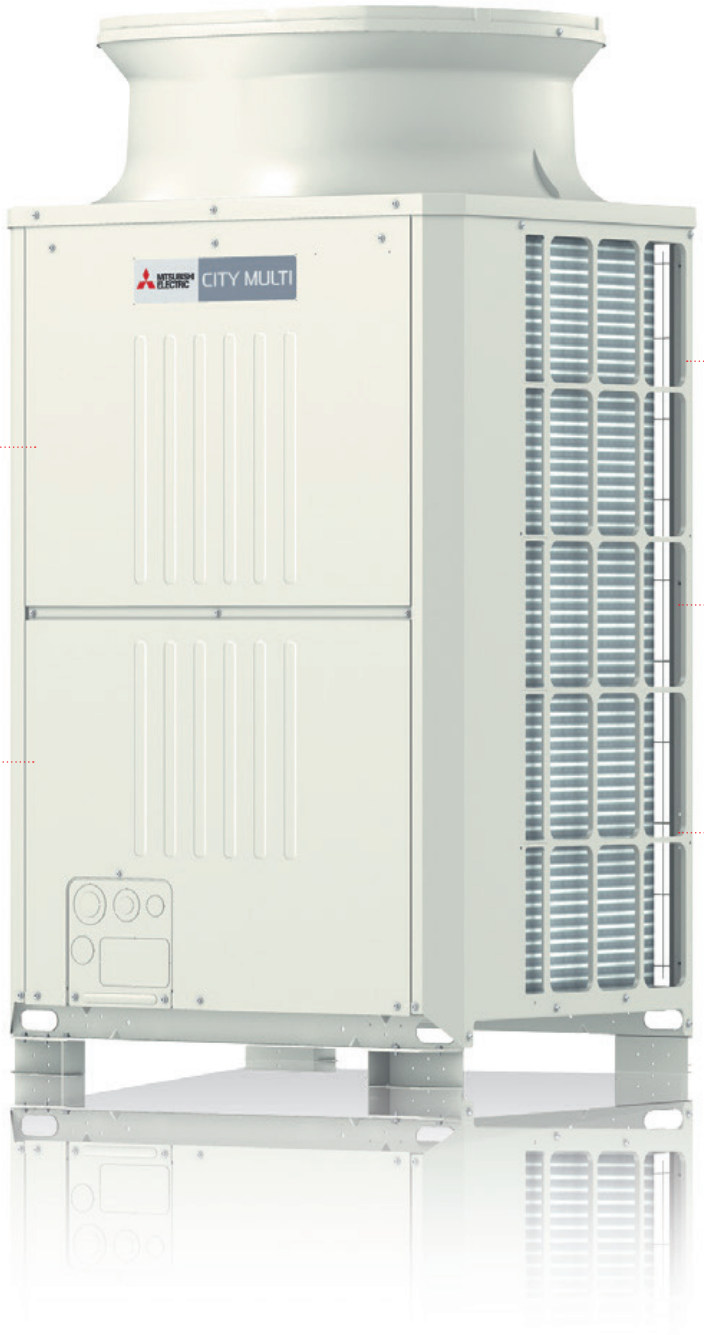
MODEL Triple				PUHY-P1350YSKA(-BS)	PUHY-P1400YSKA(-BS)	PUHY-P1450YSKA(-BS)	PUHY-P1500YSKA(-BS)
HP				54	56	58	60
Modules				PUHY-P450YKA PUHY-P450YKA PUHY-P450YKA	PUHY-P450YKA PUHY-P450YKA PUHY-P500YKA	PUHY-P450YKA PUHY-P500YKA PUHY-P500YKA	PUHY-P500YKA PUHY-P500YKA PUHY-P500YKA
Twinning joint				CMY-Y300VBK3	CMY-Y300VBK3	CMY-Y300VBK3	CMY-Y300VBK3
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz			
Cooling	Capacity*1		kW	144	151	158	165
	Power input		kW	48,64	52,24	55,83	59,56
	EER			2,96	2,89	2,83	2,77
	SEER			5,91	6,23	6,34	6,44
	Temperature operating field	Indoor WB	°C	15~24	15~24	15~24	15~24
		Outdoor DB	°C	-5~52	-5~52	-5~52	-5~52
Heating	Capacity*2		kW	144	151	158	165
	Power input		kW	46,15	49,5	52,49	56,12
	COP			3,12	3,05	3,01	2,94
	SCOP			3,39	3,50	3,51	3,51
	Temperature operating field	Indoor WB	°C	15~27	15~27	15~27	15~27
		Outdoor DB	°C	-20~15,5	-20~15,5	-20~15,5	-20~15,5
Sound pressure level*3			dB(A)	68	68,5	69,5	70
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping diameter	Liquid/Gas			19,05/41,28	19,05/41,28	19,05/41,28	19,05/41,28
External dimentions	(HxLxD)		mm	1650x1220x740 1650x1220x740 1650x1220x740	1650x1220x740 1650x1220x740 1650x1750x740	1650x1220x740 1650x1750x740 1650x1750x740	1650x1750x740 1650x1750x740 1650x1750x740
Net weight			kg	759	759	829	864
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	34,5/72,03	34,8/72,66	35,1/73,29	35,4/73,92

Key Technologies


Y HIGH EFFICIENCY

OUTDOOR UNITS - PUHY-EP YLM-A1 / YSLM-A1(-BS)

Y High Efficiency LINE | ErP COMPLIANT | Made in Japan



OUTDOOR UNIT OPTIMIZED FOR MAXIMUM PERFOMANCE AT NOMINAL LOAD CONDITIONS

EXTENDED OPERATING RANGE IN COOLING MODE, WITH MAXIMUM TEMPERATURES UP TO 52°C

CONTINUOUS HEATING

SINGLE MODULE SYSTEM FOR INSTALLATIONS UP TO 14HP

EVAPORATING TEMPERATURE CONTROL SYSTEM (E.T.C.)

Technical specifications

MODEL Single				PUHY-EP200YLM-A1(-BS)	PUHY-EP250YLM-A1(-BS)	PUHY-EP300YLM-A1(-BS)	PUHY-EP350YLM-A1(-BS)	PUHY-EP400YLM-A1(-BS)	PUHY-EP450YLM-A1(-BS)	PUHY-EP500YLM-A1(-BS)
HP				8	10	12	14	16	18	20
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz						
Cooling	Capacity*1		kW	22.4	28.0	33.5	40.0	45.0	50.0	56.0
	Power input		kW	5.19	6.89	8.56	11.69	12.26	14.79	18.72
	EER			4.31	4.06	3.91	3.42	3.67	3.38	2.99
	SEER			6.52	6.70	5.98	5.70	5.79	5.67	5.49
	Temperature operating field	Indoor WB	°C	15.0~24.0						
		Outdoor DB	°C	-5.0~52.0						
Heating	Capacity*2		kW	25.0	31.5	37.5	45.0	50.0	56.0	63.0
	Power input		kW	5.73	7.68	9.16	12.53	13.15	16.09	19.68
	COP			4.36	4.10	4.09	3.59	3.80	3.48	3.20
	SCOP			3.90	3.66	3.47	3.29	3.36	3.22	3.04
	Temperature operating field	Indoor WB	°C	15.0~27.0						
		Outdoor DB	°C	-20.0~15.5						
Sound pressure level*3			dB(A)	57	60	61	61	62.5	63	63.5
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity						
	Model/Quantity			P15~P250/1~17	P15~P250/1~21	P15~P250/1~26	P15~P250/1~30	P15~P250/1~34	P15~P250/1~39	P15~P250/1~43
Ø Ref. piping diameter	Liquid/Gas			9.52/22.2	9.52/22.2	9.52/28.58	12.7/28.58	12.7/28.58	15.88/28.58	15.88/28.58
External dimentions	(HxLxD)		mm	1710 x 920 x 740	1710 x 920 x 740	1710 x 1220 x 740	1710 x 1220 x 740	1710 x 1750 x 740	1710 x 1750 x 740	1710 x 1750 x 740
Net weight			kg	200	200	243	237	306	306	318
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	7.5 /15.66	7.5 /15.66	10.3/ 21.51	10.3/ 21.51	11.8 /24.64	11.8 /24.64	11.8 /24.64

Technical specifications

MODEL Double/Triple				PUHY-EP550YSLM-A1(-BS)	PUHY-EP600YSLM-A1(-BS)	PUHY-EP650YSLM-A1(-BS)	PUHY-EP700YSLM-A1(-BS)	PUHY-EP750YSLM-A1(-BS)	PUHY-EP800YSLM-A1(-BS)
HP				22	24	26	28	30	32
Modules				PUHY-EP(250+300) YLM-A	PUHY-EP(300+300) YLM-A	\PUHY-EP(200+200+250) YLM-A	PUHY-EP(200+200+300) YLM-A	PUHY-EP(200+250+300) YLM-A	PUHY-EP(200+300+300) YLM-A
Twinning joint				CMY-Y100VBK3					
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz					
Cooling	Capacity*1		kW	63.0	69.0	73.0	80.0	85.0	90.0
	Power input		kW	16.62	18.59	18.15	20.15	21.85	23.43
	EER			3.79	3.71	4.02	3.97	3.89	3.84
	SEER			6.17	5.82	6.40	6.17	6.23	5.99
	Temperature operating field	Indoor WB	°C	15.0~24.0					
		Outdoor DB	°C	-5.0~52.0					
Heating	Capacity*2		kW	69.0	76.5	81.5	88.0	95.0	100.0
	Power input		kW	17.73	19.66	20.07	21.67	23.92	25.18
	COP			3.89	3.89	4.06	4.06	3.97	3.97
	SCOP			3.57	3.47	3.82	3.76	3.68	3.61
	Temperature operating field	Indoor WB	°C	15.0~27.0					
		Outdoor DB	°C	-20.0~15.5					
Sound pressure level*3			dB(A)	63.5	64	63	63.5	64.5	65
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity					
	Model/Quantity			P15~P250/2~47	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping diameter	Liquid/Gas			15.88/28.58	15.88/28.58	15.88/28.58	19.05/34.93	19.05/34.93	19.05/34.93
External dimentions	(HxLxD)		mm	1710 x 920 x 740 1710 x 1220 x 740	1710 x 1220 x 740 1710 x 1220 x 740	1710 x 920 x 740 1710 x 920 x 740 1710 x 920 x 740	1710 x 920 x 740 1710 x 920 x 740 1710 x 1220 x 740	1710 x 920 x 740 1710 x 920 x 740 1710 x 1220 x 740	1710 x 920 x 740 1710 x 1220 x 740 1710 x 1220 x 740
Net weight			kg	443	486	600	643	643	686
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	17.8 /37.17	20.6 /43.01	22.5 /46.98	25.3 /52.83	25.3 /52.83	28.1 /58.67

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.
SCOP, SEER calculated according to Eurovent.

Technical specifications

MODEL Triple				PUHY-EP850YSLM-A1(-BS)	PUHY-EP900YSLM-A1(-BS)	PUHY-EP950YSLM-A1(-BS)	PUHY-EP1000YSLM-A1(-BS)	PUHY-EP1050YSLM-A1(-BS)	PUHY-EP1100YSLM-A1(-BS)
HP				34	36	38	40	42	44
Modules				PUHY-EP(250+300+300) YLM-A	PUHY-EP(300+300+300) YLM-A	PUHY-EP(300+300+350) YLM-A	PUHY-EP(300+300+300) YLM-A	PUHY-EP(300+350+400) YLM-A	PUHY-EP(350+350+400) YLM-A
Twinning joint				CMY-Y300VBK3					
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz					
Cooling	Capacity*1		kW	96.0	101.0	108.0	113.0	118.0	124.0
	Power input		kW	25.53	27.22	30.33	31.04	34.40	38.15
	EER			3.76	3.71	3.56	3.64	3.43	3.25
	SEER			6.05	5.82	5.73	5.76	5.67	5.58
	Temperature operating field	Indoor WB	°C	15.0~24.0					
		Outdoor DB	°C	-5.0~52.0					
Heating	Capacity*2		kW	108.0	113.0	119.5	127.0	132.0	140.0
	Power input		kW	27.76	29.04	32.03	33.50	36.87	41.17
	COP			3.89	3.89	3.73	3.79	3.58	3.40
	SCOP			3.53	3.47	3.41	3.43	3.37	3.31
	Temperature operating field	Indoor WB	°C	15.0~27.0					
		Outdoor DB	°C	-20.0~15.5					
Sound pressure level*3			dB(A)	65.5	66	66	66.5	66.5	66.5
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity					
	Model/Quantity			P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/3~50	P15~P250/3~50
Ø Ref. piping diameter	Liquid/Gas			19.05/41.28	19.05/41.28	19.05/41.28	19.05/41.28	19.05/41.28	19.05/41.28
External dimentions	(HxLxD)		mm	1710 x 920 x 740 1710 x 1220 x 740 1710 x 1220 x 740	1710 x 1220 x 740 1710 x 1220 x 740 1710 x 1220 x 740	1710 x 1220 x 740 1710 x 1220 x 740 1710 x 1220 x 740	1710 x 1220 x 740 1710 x 1220 x 740 1710 x 1750 x 740	1710 x 1220 x 740 1710 x 1220 x 740 1710 x 1750 x 740	1710 x 1220 x 740 1710 x 1220 x 740 1710 x 1750 x 740
Net weight			kg	686	729	723	792	786	780
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	28.1 /58.67	30.9 /64.52	30.9 /64.52	32.4 /67.65	32.4 /67.65	32.4 /67.65

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.
SCOP, SEER calculated according to Eurovent.

Technical specifications

MODEL Triple				PUHY-EP1150YSLM-A1(-BS)	PUHY-EP1200YSLM-A1(-BS)	PUHY-EP1250YSLM-A1(-BS)	PUHY-EP1300YSLM-A1(-BS)	PUHY-EP1350YSLM-A1(-BS)
HP				46	48	50	52	54
Modules				PUHY-EP(350+350+450)YLM-A	PUHY-EP(350+400+450)YLM-A	PUHY-EP(350+450+450)YLM-A	PUHY-EP(400+450+450)YLM-A	PUHY-EP(400+450+450)YLM-A
Twinning joint				CMY-Y300VBK3				
Power supply	Tens./Freq./Phase		V/Hz/n°	3 phase 380-400-415 50Hz				
Cooling	Capacity*1		kW	130.0	136.0	140.0	146.0	150
	Power input		kW	41.53	42.76	45.90	46.94	50.0
	EER			3.13	3.18	3.05	3.11	3.00
	SEER			5.54	5.57	5.53	5.56	5.52
	Temperature operating field	Indoor WB	°C	15.0~24.0				
		Outdoor DB	°C	-5.0~52.0				
Heating	Capacity*2		kW	145.0	150.0	156.5	163.0	168.0
	Power input		kW	44.47	45.45	49.36	50.62	54.36
	COP			3.26	3.30	3.17	3.22	3.09
	SCOP			3.27	3.29	3.24	3.27	3.22
	Temperature operating field	Indoor WB	°C	15.0~27.0				
		Outdoor DB	°C	-20.0~15.5				
Sound pressure level*3			dB(A)	66.5	67	67.5	68	68
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity				
	Model/Quantity			P15~P250/3~50	P15~P250/3~50	P15~P250/3~50	P15~P250/3~50	P15~P250/3~50
Ø Ref. piping diameter	Liquid/Gas			19.05/41.28	19.05/41.28	19.05/41.28	19.05/41.2	19.05/41.28
External dimentions	(HxLxD)		mm	1710 x 1220 x 740 1710 x 1220 x 740 1710 x 1750 x 740	1710 x 1220 x 740 1710 x 1750 x 740 1710 x 1750 x 740	1710 x 1220 x 740 1710 x 1750 x 740 1710 x 1750 x 740	1710 x 1750 x 740 1710 x 1750 x 740 1710 x 1750 x 740	1710 x 1750 x 740 1710 x 1750 x 740 1710 x 1750 x 740
Net weight			kg	780	849	849	918	918
Ref. Charge R410*4/ CO_2 Eq			kg/Tons	32.4 /67.65	33.9 /70.78	33.9 /70.78	35.4 /73.91	35.4 /73.91

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.
SCOP, SEER calculated according to Eurovent.

Y NEXT STAGE LINE

OUTDOOR UNITS - PUHY-(E)P Y(S)NW-A1(-BS)

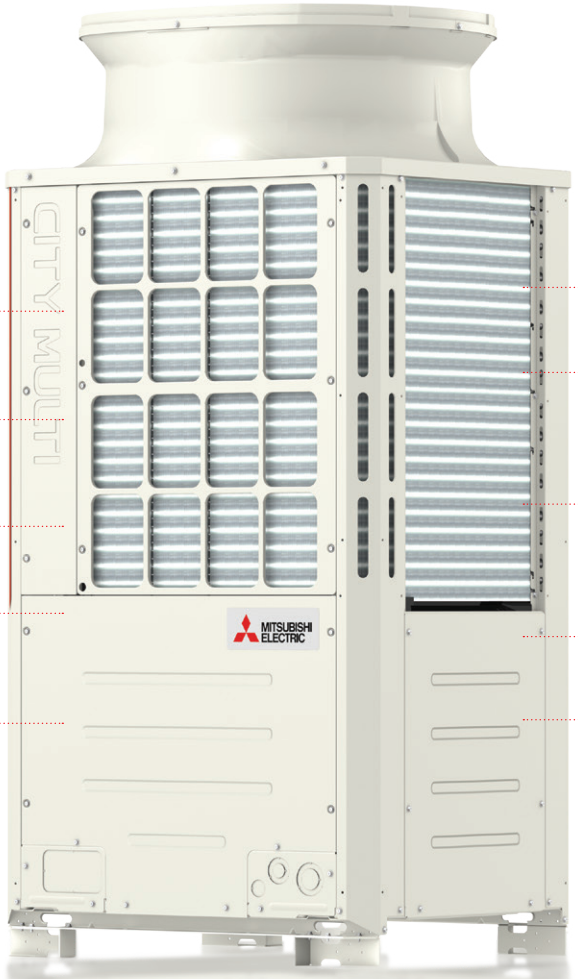
NEW FOUR-SIDED BATTERY

STATIC PRESSURE OF FAN INCREASED UP TO 80 PA.

STATIC PRESSURE OF FAN INCREASED UP TO 80 PA.

CITY MULTI

NEW FAN WITH LOW FRICTION PROFILE



COMPRESSOR OPTIMISED WITH "MULTI-PORT" TECHNOLOGY

NEW AUTO-SHIFT MODE

NEW AUTO-SHIFT MODE PREHEAT DEFROST FUNCTION

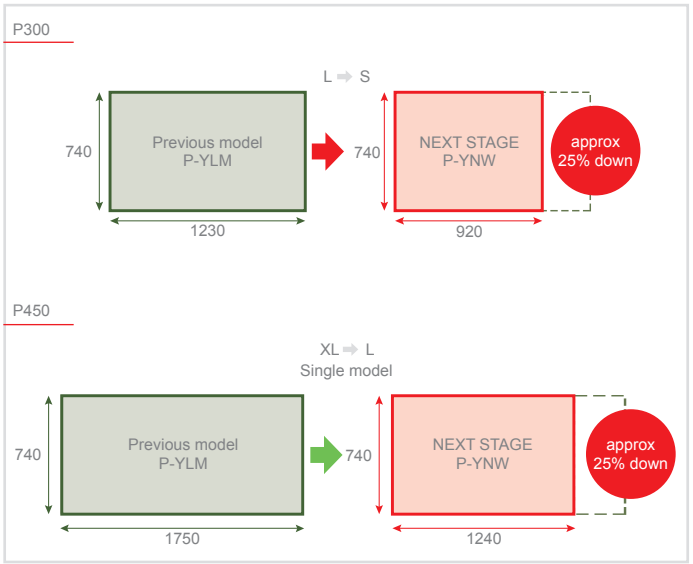
ADVANCED ETC CONTROL OF EVAPORATION TEMPERATURE.

FLEXIBLE NOISE SETTING

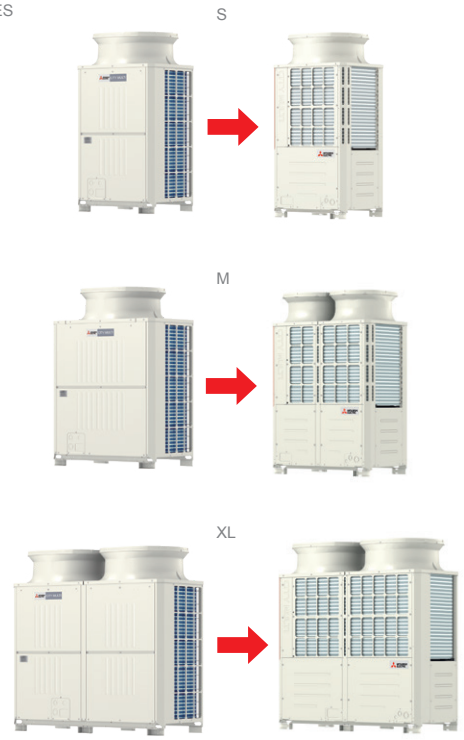
New design

The new outdoor units of the YNW series use a four-sided heat exchanger close to the top of the case near the fan. This technological and construction choice makes it possible to increase heat exchange efficiency.

NEW FOUR-SIDED BATTERY



NEW MODULES



Energy saving

Energy efficiency has been further improved compared to YLM units and now hits top of the range performance values. SEER values have been raised by 139% (P500) compared to the previous model and SCOP values by 49% (P300 and P500). This allows the new YNW units to consume less energy in both cooling and heating. All year-round saving.

Single module

		Previous model	YNW
8HP	P200	S	S
10HP	P250	S	S
12HP	P300	L	S
14HP	P350	L	L
16HP	P400	L	L
18HP	P450	XL	L
20HP	P500	XL	XL

Advanced “Low Noise” function

“Low noise” mode can now be selected from five different settings: 85%, 70%, 60% and 50% (values referring to fan speed).
Noise reduction is directly configurable from the control board of the outdoor unit. Different settings can be selected based on the installation requirements (in applications with special noise constraints).

ADVANCED “LOW NOISE” FUNCTION

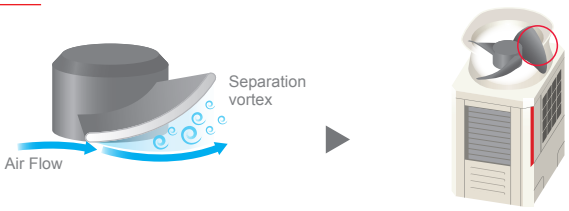
1) 50%
2) **60%**
3) **70%**
4) **85%**
5) 100%
(low noise)

3 new settings

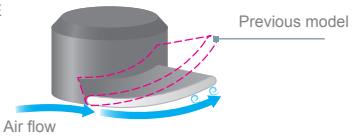
Fan blade profile

The YNW series fan has been completely redesigned to match the new four-sided battery. The profile of the fins has been optimised to minimise fluid flow losses.

PREVIOUS PROFILE



NEW FAN BLADE PROFILE



Key Technologies

NEXT STAGE generation | Inverter | M-NET POWER | Preheat Defrost | Low Noise | 52°C | Backup | High sensible heat | dual Setpoint | Auto shift | 80Pa | 90m | USB

Technical specifications

MODEL				PUHY-P200YNW-A1(-BS)	PUHY-P250YNW-A1(-BS)	PUHY-P300YNW-A1(-BS)	PUHY-P350YNW-A1(-BS)	PUHY-P400YNW-A1(-BS)
HP				8	10	12	14	16
Modules				PUHY-P200YNW-A1	PUHY-P250YNW-A1	PUHY-P300YNW-A1	PUHY-P350YNW-A1	PUHY-P400YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	22,4	28,0	33,5	40,0	45,0
	Power input (nominal)		kW	4,81	7,14	8,79	10,95	14,19
	EER			4,65	3,92	3,81	3,65	3,17
	SEER			7,5	7,0	6,7	6,7	6,39
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	22,4/25,0	28,0/31,5	33,5/37,5	40,0/45,0	45,0/50,0
	Power input (nominal)/ Power input (max)		kW	4,35/5,10	6,02/7,20	7,11/8,46	8,65/10,39	10,46/12,37
	COP/COP max			5,14/4,90	4,65/,4,37	4,71/4,43	4,62/4,33	4,30/4,04
	SCOP			4,39	4,21	4,16	4,24	4,13
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	58/59 (75/77)	60/61 (78/80)	61/64,5 (80/84)	62/64 (80/83)	65/67 (82/86)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/1-20	P10-P250/1-25	P10-P250/1-30	P10-P250/1-35	P10-P250/1-40
Ø Ref. piping diameter	Liquid		mm	9,52	9,52	9,52	12,7	12,7
	Gas		mm	22,2	22,2	22,2	28,58	28,58
Fan	Type x quantity			Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	170	185	240	270	300
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	3,5	5,3	6,7	8,6	11,4
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x1240x740	1858(1798)x1240x740
Net weight			kg	213	213	226	277	277
Refrigerant	Ref. Charge R410		kg	6,5	6,5	6,5	9,8	9,8
	CO_2 eq.*6		Tons	13,57	13,57	13,57	20,46	20,46

*1*2*3 Nominal conditions:
Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m
*2 Capacità nominale (registrata Eurovent - Conto Termico e Detrazioni)
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 Without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUHY-P450YNW-A1(-BS)	PUHY-P500YNW-A1(-BS)	PUHY-P400YSNW-A1(-BS)	PUHY-P450YSNW-A1(-BS)	PUHY-P500YSNW-A1(-BS)
HP				18	20	16	18	20
Modules				PUHY-P450YNW-A1	PUHY-P500YNW-A1	PUHY-P(200+200)YNW-A1	PUHY-P(200+250)YNW-A1	PUHY-P(250+250)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	50,0	56,0	45,0	50,0	56,0
	Power input (nominal)		kW	14,57	17,55	9,97	12,16	14,73
	EER			3,43	3,19	4,51	4,11	3,80
	SEER			6,48	6,32	7,42	7,19	7,02
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	50,0/56,0	56,0/63,0	45,0/50,0	50,0/56,0	56,0/63,0
	Power input (nominal)/ Power input (max)		kW	11,68/14,00	13,42/15,98	9,03/10,52	10,59/12,55	12,41/14,89
	COP/COP max			4,28/4,00	4,17/3,94	4,98/4,75	4,72/4,46	4,51/4,23
	SCOP			4,00	3,91	4,27	4,16	4,08
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	65,5/69,5 (84/89)	63,5/66,5 (82/85)	61/62 (78/80)	62/63 (80/82)	63/64 (81/83)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/1-45	P10-P250/1-50	P10-P250/1-40	P10-P250/1-45	P10-P250/1-50
Ø Ref. piping diameter	Liquid		mm	15,88	15,88	12,7	15,88	15,88
	Gas		mm	28,58	28,58	28,58	28,58	28,58
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	305	365	170+170	170+185	185+185
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	11,7	13,3	3,5+3,5	3,5+5,3	5,3+5,3
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740	1858(1798)x1750x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740
Net weight			kg	293	334	213+213	213+213	213+213
Refrigerant	Ref. Charge R410		kg	10,8	10,8	13	13	13
	CO_2 eq.*6		Tons	22,55	22,55	27,14	27,14	27,14

Technical specifications

MODEL				PUHY-P550YSNW-A1(-BS)	PUHY-P600YSNW-A1(-BS)	PUHY-P650YSNW-A1(-BS)	PUHY-P700YSNW-A1(-BS)	PUHY-P750YSNW-A1(-BS)
HP				22	24	26	28	30
Modules				PUHY-P(250+300)YNW-A1	PUHY-P(300+300)YNW-A1	PUHY-P(250+400)YNW-A1	PUHY-P(350+350)YNW-A1	PUHY-P(350+400)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	63,0	69,0	73,0	80,0	85,0
	Power input (nominal)		kW	16,84	18,69	21,79	22,59	25,83
	EER			3,74	3,69	3,35	3,54	3,29
	SEER			6,76	6,57	6,50	6,63	6,46
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	63,0/69,0	69,0/76,5	73,0/81,5	80,0/88,0	85,0/95,0
	Power input (nominal)/ Power input (max)		kW	13,87/16,15	15,13/17,83	16,97/20,17	17,85/20,95	19,72/23,45
	COP/COP max			4,54/4,27	4,56/4,29	4,30/4,04	4,48/4,20	4,31/4,05
	SCOP			4,06	4,03	4,04	4,10	4,05
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	63,5/66 (82/85)	64/67,5 (83/87)	66,5/68 (83/87)	65/67 (83/86)	67/68,5 (84/88)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	15,88	15,88	15,88	19,05	19,05
	Gas		mm	28,58	28,58	28,58	34,93	34,93
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 3	Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	185+240	240+240	185+300	270+270	270+300
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	5,3+6,7	6,7 + 6,7	5,3 + 11,4	8,6+8,6	8,6+11,4
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	213+226	226+226	213+277	277+277	277+277
Refrigerant	Ref. Charge R410		kg	13	13	16,3	19,6	19,6
	CO_2 eq.*6		Tons	27,14	27,14	34,03	40,92	40,92

*1*2*3 Nominal conditions:
Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m
*2 Capacità nominale (registrata Eurovent - Conto Termico e Detrazioni)
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 Without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUHY-P800YSNW-A1(-BS)	PUHY-P850YSNW-A1(-BS)	PUHY-P900YSNW-A1(-BS)	PUHY-P950YSNW-A1(-BS)	PUHY-P1000YSNW-A1(-BS)
HP				32	34	36	38	40
Modules				PUHY-P(350+450)YNW-A1	PUHY-P(400+450)YNW-A1	PUHY-P(450+450)YNW-A1	PUHY-P (250+350+350)YNW-A1	PUHY-P (250+350+400)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	90	96,0	101,0	108,0	113,0
	Power input (nominal)		kW	26,31	30,0	30,42	30,0	33,13
	EER			3,42	3,20	3,32	3,60	3,41
	SEER			6,48	6,38	6,41	6,72	6,59
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	90,0/100,0	96,0/108,0	101,0/113,0	108,0/119,5	113,0/127,0
	Power input (nominal)/ Power input (max)		kW	20,97/24,87	23,07/27,76	24,33/29,12	24,10/28,38	25,91/31,05
	COP/COP max			4,29/4,02	4,16/3,89	4,15/3,88	4,48/4,21	4,36/4,09
	SCOP			3,88	3,86	3,71	4,09	4,06
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	67,5/71 (85/90)	68,5/71,5 (86/91)	68,5/72,5 (87/92)	66/68 (84/87)	68/69,5 (85/88)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	19,05	19,05	19,05	19,05	19,05
	Gas		mm	34,93	41,28	41,28	41,28	41,28
Fan	Type x quantity			Propeller fan x 4	Propeller fan x 4	Propeller fan x 4	Propeller fan x 5	Propeller fan x 5
	Air flow		m^3/min	270+305	300+305	305+305	185+270+270	185+270+300
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	8,6+11,7	11,4+11,7	11,7+11,7	5,3+8,6+8,6	5,3+8,6+11,4
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x920x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x920x740 1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	277+293	277+293	293+293	213+277+277	213+277+277
Refrigerant	Ref. Charge R410		kg	20,6	20,6	21,6	26,1	26,1
	CO_2 eq.*6		Tons	43,01	43,01	45,10	54,49	54,49

Technical specifications

MODEL				PUHY-P1050YSNW-A1(-BS)	PUHY-P1100YSNW-A1(-BS)	PUHY-P1150YSNW-A1(-BS)	PUHY-P1200YSNW-A1(-BS)	PUHY-P1250YSNW-A1(-BS)
HP				42	44	46	48	50
Modules				PUHY-P (250+400+400)YNW-A1	PUHY-P (350+350+400)YNW-A1	PUHY-P (350+400+400)YNW-A1	PUHY-P (400+400+400)YNW-A1	PUHY-P (400+400+450)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	118,0	124,0	130,0	136,0	140,0
	Power input (nominal)		kW	36,41	36,79	40,49	44,29	44,30
	EER			3,24	3,37	3,21	3,07	3,16
	SEER			6,47	6,49	6,38	6,29	6,30
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	118,0/132,0	124,0/140,0	130,0/145,0	136,0/150,0	140,0/156,5
	Power input (nominal)/ Power input (max)		kW	27,76/33,08	28,44/34,22	30,51/36,25	32,61/38,36	33,65/40,12
	COP/COP max			4,25/3,99	4,36/4,09	4,26/4,00	4,17/3,91	4,16/3,90
	SCOP			4,05	4,07	4,03	4,01	3,91
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	68,5/70,5 (86/90)	68,5/70 (86/89)	69/71 (86/90)	70/72 (87/91)	70/73 (88/92)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/3-50	P10-P250/3-50	P10-P250/3-50	P10-P250/3-50	P10-P250/3-50
Ø Ref. piping diameter	Liquid		mm	19,05	19,05	19,05	19,05	19,05
	Gas		mm	41,28	41,28	41,28	41,28	41,28
Fan	Type x quantity			Propeller fan x 5	Propeller fan x 6	Propeller fan x 6	Propeller fan x 6	Propeller fan x 6
	Air flow		m^3/min	185+300+300	270+270+300	270+300+300	300+300+300	300+300+305
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	5,3+11,4+11,4	8,6+8,6+11,4	8,6+11,4+11,4	11,4+11,4+11,4	11,4+11,4+11,7
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	213+277+277	277+277+277	277+277+277	277+277+277	277+277+293
Refrigerant	Ref. Charge R410		kg	26,1	29,4	29,4	29,4	30,4
	CO_2 eq.*6		Tons	54,49	61,38	61,38	61,38	63,47

*1*2*3 Nominal conditions:
Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m
*2 Capacità nominale (registrata Eurovent - Conto Termico e Detrazioni)
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 Without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUHY-P1300YSNW-A1(-BS)	PUHY-P1350YSNW-A1(-BS)
HP				52	54
Modules				PUHY-P (400+450+450)YNW-A1	PUHY-P (450+450+450)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz	
Cooling	Capacity (nominal) *1		kW	146,0	150,0
	Power input (nominal)		kW	45,06	45,18
	EER			3,24	3,32
	SEER			6,32	6,34
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	146,0/163,0	150,0/168,0
	Power input (nominal)/ Power input (max)		kW	35,18/41,90	36,14/43,29
	COP/COP max			4,15/3,89	4,15/3,88
	SCOP			3,81	3,71
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	70/73,5 (88/93)	70,5/74,5 (89/94)
Connectable indoor units	Total Capacity			50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/3-50	P15-P250/1-39
Ø Ref. piping diameter	Liquid		mm	19,05	15,88
	Gas		mm	41,28	28,58
Fan	Type x quantity			Propeller fan x 6	Propeller fan x 6
	Air flow		m^3/min	300+305+305	305+305+305
Compressor	Type			Inverter scroll hermetic	
	Motor output		kW	11,4+11,7+11,7	11,7+11,7+11,7
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	277+293+293	293+293+293
Refrigerant	Ref. Charge R410		kg	31,14	32,4
	CO_2 eq.*6		Tons	65,56	67,65

Technical specifications

MODEL				PUHY-EP200YNW-A1 (-BS)	PUHY-EP250YNW-A1 (-BS)	PUHY-EP300YNW-A1 (-BS)	PUHY-EP350YNW-A1 (-BS)	PUHY-EP400YNW-A1 (-BS)
HP				8	10	12	14	16
Modules				PUHY-EP200YNW-A1	PUHY-EP250YNW-A1	PUHY-EP300YNW-A1	PUHY-EP350YNW-A1	PUHY-EP400YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	22.4	28.0	33.5	40.0	45.0
	Power input (nominal)		kW	4.47	6.55	7.73	9.97	12.39
	EER			5.01	4.27	4.33	4.01	3.63
	SEER			7.76	7.51	7.26	7.03	7.02
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	22.4 / 25.0	28.0 / 31.5	33.5 / 37.5	40.0 / 45.0	45.0 / 50.0
	Power input (nominal)/ Power input (max)		kW	4.29 / 4.97	5.89 / 7.00	6.76 / 8.06	8.28 / 9.91	10.02 / 11.90
	COP/COP max			5.22 / 5.03	4.75 / 4.50	4.95 / 4.65	4.83 / 4.54	4.49 / 4.20
	SCOP			4.45	4.31	4.22	4.40	4.28
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	58.0/59.0 (75/78)	60.0/61.0 (78/80)	61.0/64.5 (80/84)	62.0/63.5 (80/83)	65.0/65.5 (82/84)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/1-20	P10-P250/1-25	P10-P250/1-30	P10-P250/1-35	P10-P250/1-40
Ø Ref. piping diameter	Liquid		mm	9.52	9.52	9.52	12.7	12.7
	Gas		mm	22.2	22.2	28.58	28.58	28.58
Fan	Type x quantity			Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	170	185	240	270	270
Compressor	Type			Inverter scroll hermetic compressor				
	Motor output		kW	3.4	5.1	6.1	7.7	9.8
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x1240x740	1858(1798)x1240x740
Net weight			kg	228	228	231	282	303
Refrigerant	Ref. Charge R410		kg	6,5	6,5	6,5	9,8	10,8
	CO_2 eq.*6		Tons	13,57	13,57	13,57	20,46	22,55

*1*2*3 Nominal conditions:
Nominal heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m
*2 Capacità nominale (registrata Eurovent - Conto Termico e Detrazioni)
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 Without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUHY-EP450YNW-A1 (-BS)	PUHY-EP500YNW-A1 (-BS)	PUHY-EP400YSNW-A1 (-BS)	PUHY-EP450YSNW-A1 (-BS)	PUHY-EP500YSNW-A1 (-BS)
HP				18	20	16	18	20
Modules				PUHY-EP450YNW-A1	PUHY-EP500YNW-A1	PUHY-EP(200+200)YNW-A1	PUHY-EP(200+250)YNW-A1	PUHY-EP(250+250)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	50.0	56.0	45.0	50.0	56.0
	Power input (nominal)		kW	13.85	16.56	9.27	11.21	13.52
	EER			3.61	3.38	4.85	4.46	4.14
	SEER			7.07	6.55	7.90	7.70	7.57
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	50.0 / 56.0	56.0 / 63.0	45.0 / 50.0	50.0 / 56.0	56.0 /
	Power input (nominal)/ Power input (max)		kW	11.38 / 13.65	13.36 / 15.94	8.89 / 10.26	10.39 / 12.20	12.17 /
	COP/COP max			4.39 / 4.10	4.19 / 3.95	5.06 / 4.87	4.81 / 4.59	4.60 /
	SCOP			4.17	4.02	4.33	4.24	4.18
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	65.5/69.5 (84/88)	63.5/66.5 (82/85)	61.0/62.0 (78/81)	62.0/63.0 (80/82)	63.0/64.0 (81/83)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/1-45	P10-P250/1-50	P10-P250/1-40	P10-P250/1-45	P10-P250/1-50
Ø Ref. piping diameter	Liquid		mm	15.88	15.88	12.7	15.88	15.88
	Gas		mm	28.58	28.58	28.58	28.58	28.58
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	305	365	170 + 170	170 + 185	185 + 185
Compressor	Type			Inverter scroll hermetic compressor				
	Motor output		kW	11.1	12.5	3.4 + 3.4	5.1 + 3.4	5.1 + 5.1
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740	1858(1798)x1750x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740
Net weight			kg	303	342	228 + 228	228 + 228	228 + 228
Refrigerant	Ref. Charge R410		kg	10,8	10,8	13	13	13
	CO_2 eq.*6		Tons	22,55	22,55	27,14	27,14	27,14

Technical specifications

MODEL				PUHY-EP550YSNW-A1 (-BS)	PUHY-EP600YSNW-A1 (-BS)	PUHY-EP650YSNW-A1 (-BS)	PUHY-EP700YSNW-A1 (-BS)	PUHY-EP750YSNW-A1 (-BS)
HP				22	24	26	28	30
Modules				PUHY-EP(250+300)YNW-A1	PUHY-EP(300+300)YNW-A1	PUHY-EP(250+400)YNW-A1	PUHY-EP(350+350)YNW-A1	PUHY-EP(350+400)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	63.0	69.0	73.0	80.0	85.0
	Power input (nominal)		kW	15.10	16.42	19.46	20.61	23.03
	EER			4.17	4.20	3.75	3.88	3.69
	SEER			7.38	7.24	7.06	6.92	6.91
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	63.0 / 69.0	69.0 / 76.5	73.0 / 81.5	80.0 / 88.0	85.0 / 95.0
	Power input (nominal)/ Power input (max)		kW	13.37 / 15.54	14.37 / 16.96	16.40 / 19.49	17.09 / 20.00	18.88 / 22.51
	COP/COP max			4.71 / 4.44	4.80 / 4.51	4.45 / 4.18	4.68 / 4.40	4.50 / 4.22
	SCOP			4.14	4.10	4.16	4.26	4.20
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	63.5/66.0 (82/85)	64.0/67.5 (83/87)	66.5/67.0 (83/85)	65.0/66.5 (83/86)	67.0/67.5 (84/87)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	15.88	15.88	15.88	19.05	19.05
	Gas		mm	28.58	28.58	28.58	34.93	34.93
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 3	Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	185 + 240	240 +240	185 + 270	270 + 270	270 + 270
Compressor	Type			Inverter scroll hermetic compressor				
	Motor output		kW	5.1 + 6.1	6.1 + 6.1	5.1 + 9.8	7.7 + 7.7	7.7 + 9.8
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	228 + 231	231 + 231	228 + 303	282 + 282	282 + 303
Refrigerant	Ref. Charge R410		kg	13	13	17,3	19,6	20,6
	CO_2 eq.*6		Tons	27,14	27,14	36,12	40,92	43,01

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUHY-EP800YSNW-A1 (-BS)	PUHY-EP850YSNW-A1 (-BS)	PUHY-EP900YSNW-A1 (-BS)	PUHY-EP950YSNW-A1 (-BS)	PUHY-EP1000YSNW-A1 (-BS)
HP				32	34	36	38	40
Modules				PUHY-EP(350+450)YNW-A1	PUHY-EP(400+450)YNW-A1	PUHY-EP(450+450)YNW-A1	PUHY-EP(250+350+350)YNW-A1	PUHY-EP(250+350+400)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	90.0	96.0	101.0	108.0	113.0
	Power input (nominal)		kW	24.52	27.35	28.85	27.34	29.73
	EER			3.67	3.51	3.50	3.95	3.80
	SEER			6.94	6.97	6.99	7.09	7.06
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	90.0 / 100.0	96.0 / 108.0	101.0 / 113.0	108.0 / 119.5	113.0 / 127.0
	Power input (nominal)/ Power input (max)		kW	20.27 / 24.03	22.32 / 26.86	23.76 / 28.46	23.17 / 27.22	24.94 / 29.81
	COP/COP max			4.44 / 4.16	4.30 / 4.02	4.25 / 3.97	4.66 / 4.39	4.53 / 4.26
	SCOP			4.21	4.16	4.15	4.24	4.20
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	67.5/70.5 (85/89)	68.5/71.0 (86/89)	68.5/72.5 (87/91)	66.0/67.5 (84/87)	68.0/68.5 (85/87)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	19.05	19.05	19.05	19.05	19.05
	Gas		mm	34.93	41.28	41.28	41.28	41.28
Fan	Type x quantity			Propeller fan x 4	Propeller fan x 4	Propeller fan x 4	Propeller fan x 5	Propeller fan x 5
	Air flow		m^3/min	270 + 305	270 + 305	305 + 305	185 + 270 + 270	185 + 270 + 270
Compressor	Type			Inverter scroll hermetic compressor				
	Motor output		kW	7.7 + 11.1	9.8 + 11.1	11.1 + 11.1	5.1 + 7.7 + 7.7	5.1 + 7.7 + 7.7
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x920x740 1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	282 + 303	303 + 303	303 + 303	282 + 282 +282	228 + 228 + 303
Refrigerant	Ref. Charge R410		kg	20,6	21,6	21,6	26,1	27,1
	CO_2 eq.*6		Tons	43,01	45,1	45,1	54,49	56,58

Technical specifications

MODEL				PUHY-EP1050YSNW-A1 (-BS)	PUHY-EP1100YSNW-A1 (-BS)	PUHY-EP1150YSNW-A1 (-BS)	PUHY-EP1200YSNW-A1 (-BS)	PUHY-EP1250YSNW-A1 (-BS)
HP				42	44	46	48	50
Modules				PUHY-EP(250+400+400)YNW-A1	PUHY-EP(350+350+400)YNW-A1	PUHY-EP(350+400+400)YNW-A1	PUHY-EP(400+400+400)YNW-A1	PUHY-EP(400+400+450)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	118.0	124.0	130.0	136.0	140.0
	Power input (nominal)		kW	32.24	33.06	35.81	38.63	39.88
	EER			3.66	3.75	3.63	3.52	3.51
	SEER			7.04	6.89	6.87	6.87	6.88
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	118.0 / 132.0	124.0 / 140.0	130.0 / 145.0	136.0 / 150.0	140.0 / 156.5
	Power input (nominal)/ Power input (max)		kW	26.75 / 31.88	27.19 / 32.71	29.21 / 34.77	31.26 / 36.85	32.40 / 38.83
	COP/COP max			4.41 / 4.14	4.56 / 4.28	4.45 / 4.17	4.35 / 4.07	4.32 / 4.03
	SCOP			4.15	4.22	4.19	4.15	4.16
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	68.5/69.0 (86/88)	68.5/69.0 (86/88)	69.0/69.5 (86/88)	70.0/70.5 (87/89)	70.0/72.0 (88/91)
Connectable indoor units	Total Capacity			50-130%	50-130%	50-130%	50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/3-50	P10-P250/3-50	P10-P250/3-50	P10-P250/3-50	P10-P250/3-50
Ø Ref. piping diameter	Liquid		mm	19.05	19.05	19.05	19.05	19.05
	Gas		mm	41.28	41.28	41.28	41.28	41.28
Fan	Type x quantity			Propeller fan x 5	Propeller fan x 6	Propeller fan x 6	Propeller fan x 6	Propeller fan x 6
	Air flow		m^3/min	185 + 270 + 270	270 + 270 + 270	270 + 270 + 270	270 + 270 + 270	270 + 270 + 305
Compressor	Type			Inverter scroll hermetic compressor				
	Motor output		kW	5.1 + 9.8 + 9.8	7.7 + 7.7 + 9.8	7.7 + 9.8 + 9.8	9.8 + 9.8 + 9.8	9.8 + 9.8 + 11.1
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	228 + 303 +303	282 +282 + 303	228 + 303 +303	303 + 303 +303	303 + 303 +303
Refrigerant	Ref. Charge R410		kg	28,1	30,4	30,4	32,4	32,4
	CO_2 eq.*6		Tons	58,67	63,47	63,47	67,65	67,65

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PUHY-EP1300YSNW-A1 (-BS)	PUHY-EP1350YSNW-A1 (-BS)
HP				52	54
Modules				PUHY-EP(400+450+450)YNW-A1	PUHY-EP(450+450+450)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz	
Cooling	Capacity (nominal) *1		kW	146.0	150.0
	Power input (nominal)		kW	41.71	42.85
	EER			3.50	3.50
	SEER			6.90	6.91
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	146.0 / 163.0	150.0 / 168.0
	Power input (nominal)/ Power input (max)		kW	34.11 / 40.75	35.29 / 42.31
	COP/COP max			4.28 / 4.00	4.25 / 3.97
	SCOP			4.16	4.15
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	70/73,5(88/92)	70.5/74.5 (89/93)
Connectable indoor units	Total Capacity			50-130%	50-130%
	Model/Quantity	CITY MULTI		P10-P250/3-50	P10-P250/3-50
Ø Ref. piping diameter	Liquid		mm	19.05	19.05
	Gas		mm	41.28	41.28
Fan	Type x quantity			Propeller fan x 6	Propeller fan x 6
	Air flow		m^3/min	270 + 305 + 305	305 + 305 + 305
Compressor	Type			Inverter scroll hermetic compressor	
	Motor output		kW	9.8 + 11.1 + 11.1	11.1 + 11.1 + 11.1
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	303 + 303 +303	303 + 303 +303
Refrigerant	Ref. Charge R410		kg	32,4	32,4
	CO_2 eq.*6		Tons	67,65	67,65

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard


office

R2 NEXT STAGE LINE

OUTDOOR UNITS - PURY-(E)P Y(S)NW-A1(-BS)

Made in Japan

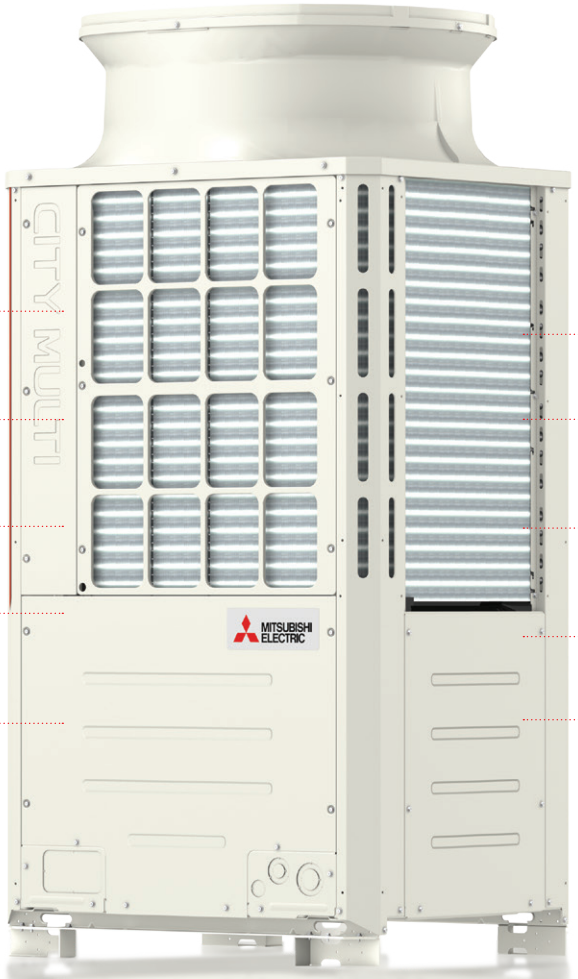
NEW FOUR-SIDED BATTERY

STATIC PRESSURE OF FAN INCREASED UP TO 80 PA.

STATIC PRESSURE OF FAN INCREASED UP TO 80 PA.

CITY MULTI

NEW FAN WITH LOW FRICTION PROFILE



COMPRESSOR OPTIMISED WITH “MULTI-PORT” TECHNOLOGY

NEW AUTO-SHIFT MODE

NEW AUTO-SHIFT MODE PREHEAT DEFROST FUNCTION

ADVANCED ETC CONTROL OF EVAPORATION TEMPERATURE.

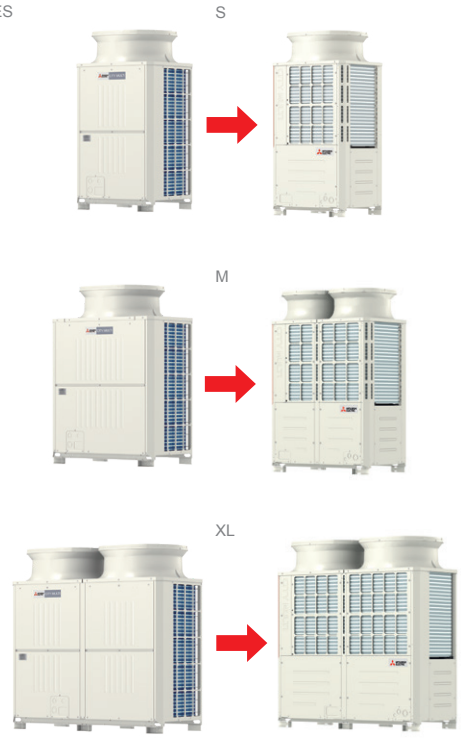
FLEXIBLE NOISE SETTING

New design

The new outdoor units of the YNW series use a four-sided heat exchanger close to the top of the case near the fan. This technological and construction choice makes it possible to increase heat exchange efficiency.

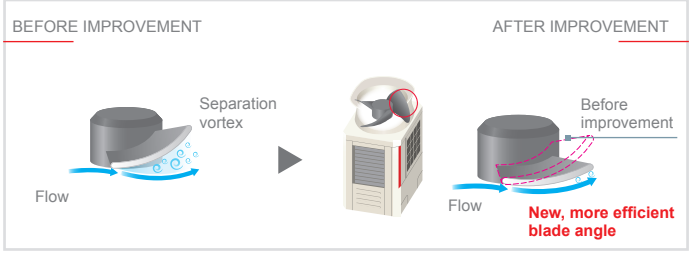
NEW FOUR-SIDED BATTERY

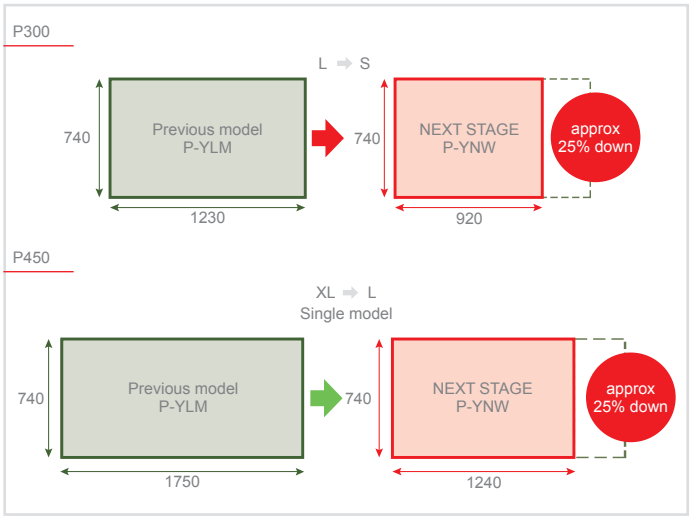
NEW MODULES



New fan with new blade profile

The fan of the new YNW series has been completely redesigned to fit with the new four-sided battery. The profile of the fins has been optimised to minimise fluid flow losses.





Energy saving

Energy efficiency has been further improved compared to YLM units and now hits top of the range performance values. SEER values have been raised by 139% (P500) compared to the previous model and SCOP values by 49% (P300 and P500). This allows the new YNW units to consume less energy in both cooling and heating. All year-round saving.

Single module

		Previous model	YNW
8HP	P200	S	S
10HP	P250	S	S
12HP	P300	L	S
14HP	P350	L	L
16HP	P400	L	L
18HP	P450	XL	L
20HP	P500	XL	XL

Advanced “Low Noise” function

Low noise” mode can now be selected using five different settings: 85%, 70%, 60% and 50% (values referring to ventilation speed). Noise reduction is directly configurable from the control board of the outdoor unit. Different settings can be selected depending on the installation requirements (in applications with special noise constraints).

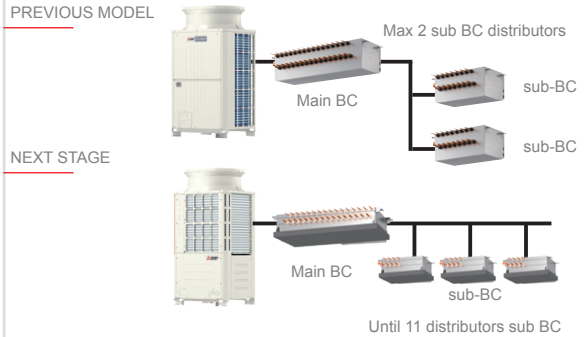
New BC distributor

Increased number of connections (for systems with BC SUB distributor) and increased geometric limits. In the R2 heat recovery systems of the new YNW line, up to 11 BC SUB distributors can be connected to the BC Main distributor, thus allowing greater flexibility of configuration. The adoption of the new architecture allows a reduction of the refrigerant charge in the system.

ADVANCED “LOW NOISE” FUNCTION

1) 50%
2) **60%**
3) **70%**
4) **85%**
5) 100% (low noise)

3 new settings



Key Technologies

Technical specifications

MODEL				PURY-P200YNW-A1(-BS)	PURY-P250YNW-A1(-BS)	PURY-P300Y76NW-A1(-BS)	PURY-P350YNW-A1(-BS)	PURY-P400YNW-A1(-BS)
HP				8	10	12	14	16
Modules				PURY-P200YNW-A1	PURY-P250YNW-A1	PURY-P300YNW-A1	PURY-P350YNW-A1	PURY-P400YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	22,4	28,0	33,5	40,0	45,0
	Power input (nominal)		kW	5,27	7,25	8,98	10,98	14,61
	EER			4,25	3,86	3,73	3,64	3,08
	SEER			7,47	6,94	6,62	6,60	6,31
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	22,4/25,0	28,0/31,5	33,5/37,5	40,0/45,0	45,0/50,0
	Power input (nominal)/ Power input (max)		kW	4,45/5,33	6,22/7,42	8,03/9,54	9,28/11,13	11,65/13,77
	COP/COP max			5,03/4,69	4,50/4,24	4,17/3,93	4,31/4,04	3,86/3,63
	SCOP			3,96	4,05	3,81	3,72	4,10
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	59/59 (76/78)	60,5/61 (78/80)	61/67 (80/86)	62,5/64 (81/83)	65/69 (83/88)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/1-20	P10-P250/1-25	P10-P250/1-30	P10-P250/1-35	P10-P250/1-40
Ø Ref. piping diameter	Liquid		mm	15,88	19,05	19,05	19,05	22,2
	Gas		mm	19,05	22,2	22,2	28,58	28,58
Fan	Type x quantity			Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	170	185	240	250	315
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	3,7	5,5	7,3	8,7	11,7
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x1240x740	1858(1798)x1240x740
Net weight			kg	214	223	225	269	269
Refrigerant	Ref. Charge R410		kg	5,2	5,2	5,2	8,0	8,0
	CO_2 eq.*6		Tons	10,85	10,85	10,85	16,70	16,70

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PURY-P450YNW-A1(-BS)	PURY-P500YNW-A1(-BS)	PURY-P550YNW-A1(-BS)	PURY-P400YSNW-A1(-BS)	PURY-P450YSNW-A1(-BS)	PURY-P500YSNW-A1(-BS)
HP				18	20	22	16	18	20
Modules				PURY-P450YNW-A1	PURY-P500YNW-A1	PURY-P550YNW-A1	PURY-P(200+200)YNW-A1	PURY-P(200+250)YNW-A1	PURY-P(250+250)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz					
Cooling	Capacity (nominal) *1		kW	50,0	56,0	63,0	45,0	50,0	56,0
	Power input (nominal)		kW	14,83	18,54	22.18	10,92	12,72	14,97
	EER			3,37	3,02	2.84	4,12	3,93	3,74
	SEER			6,40	6,32	6.06	7,39	7,09	6,84
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	50,0/56,0	56,0/63	63,0/69,0	45,0/50,0	50,0/56,0	56,0/63,0
	Power input (nominal)/ Power input (max)		kW	12,46/15,42	14,47/17,50	20,29	9,22/10,98	10,82/12,93	12,81/15,32
	COP/COP max			4,01/3,63	3,87/3,60	3.69	4,88/4,55	4,62/4,33	4,37/4,11
	SCOP			4,03	4,05	4.05	3,84	3,89	3,93
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	65,5/70 (83/89)	63,5/64,5 (82/84)	66,0/70,0	62/62 (79/81)	63/63,5 (81/83)	63,5/64 (81/83)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/1-45	P10-P250/1-50	P10-P250/2-50	P10-P250/1-40	P10-P250/1-45	P10-P250/1-50
Ø Ref. piping diameter	Liquid		mm	22,2	22,2	22,2	22,2	22,2	22,2
	Gas		mm	28,58	28,58	28,58	28,58	28,58	28,58
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	315	295	410	170+170	170+185	185+185
Compressor	Type			Inverter scroll hermetic					
	Motor output		kW	12,4	14,2	17,4	3,7+3,7	3,7+5,5	5,5+5,5
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740	1858(1798)x1750x740	1858(1798)x1750x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740
Net weight			kg	289	335	335 (739)	214+214	214+223	223+223
Refrigerant	Ref. Charge R410		kg	10,8	10,8	10,8	10,4	10,4	10,4
	CO_2 eq.*6		Tons	22,55	22,55	22,55	21,71	21,71	21,71

Technical specifications

MODEL				PURY-P550YSNW-A1(-BS)	PURY-P600YSNW-A1(-BS)	PURY-P650YSNW-A1(-BS)	PURY-P700YSNW-A1(-BS)	PURY-P750YSNW-A1(-BS)
HP				22	24	26	28	30
Modules				PURY-P(250+300)YNW-A1	PURY-P(300+300)YNW-A1	PURY-P(300+350)YNW-A1	PURY-P(350+350)YNW-A1	PURY-P(350+400)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	63,0	69,0	73,0	80,0	85,0
	Power input (nominal)		kW	17,11	19,06	20,44	22,66	26,07
	EER			3,68	3,62	3,57	3,53	3,26
	SEER			6,58	6,38	6,26	6,27	6,25
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	63,0/69,0	69,0/76,5	73,0/81,5	80,0/88,0	85,0/95,0
	Power input (nominal)/ Power input (max)		kW	15,0/17,42	17,07/20,07	17,76/21,05	19,13/22,44	21,46/25,53
	COP/COP max			4,20/3,96	4,04/3,81	4,11/3,87	4,18/3,92	3,96/3,72
	SCOP			3,81	3,69	3,65	3,61	3,61
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	64/68 (83/87)	64/70 (83/89)	65/69 (84/88)	65,5/67 (84/86)	67/70,5 (86/90)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	22,2	22,2	28,58	28,58	28,58
	Gas		mm	28,58	28,58	28,58	34,93	34,93
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 3	Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	185+240	240+240	240+250	250+250	250+315
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	5,5+7,3	7,3+7,3	7,3+8,7	8,7+8,7	8,7+11,7
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	223+225	225+225	225+269	269+269	269+269
Refrigerant	Ref. Charge R410		kg	10,4	10,4	13,2	16	16
	CO_2 eq.*6		Tons	21,71	21,71	27,56	33,40	33,40

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PURY-P800YSNW-A1(-BS)	PURY-P850YSNW-A1(-BS)	PURY-P900YSNW-A1(-BS)	PURY-P950YSNW-A1(-BS)	PURY-P1000YSNW-A1(-BS)
HP				32	34	36	38	40
Modules				PURY-P(400+400)YNW-A1	PURY-P(400+450)YNW-A1	PURY-P(450+450)YNW-A1	PURY-P(450+500)YNW-A1	PURY-P(500+500)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz				
Cooling	Capacity (nominal) *1		kW	90,0	96,0	101,0	108,0	113,0
	Power input (nominal)		kW	30,10	30,67	30,88	34,83	38,56
	EER			2,99	3,13	3,27	3,10	2,93
	SEER			6,22	6,30	6,33	6,22	6,05
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	90,0/100,0	96,0/108,0	101,0/113	108,0/119,5	113,0/127,0
	Power input (nominal)/ Power input (max)		kW	24,06/28,40	25,13/30,68	25,96/32,10	28,27/34,04	30,13/36,38
	COP/COP max			3,74/3,52	3,82/3,52	3,89/3,52	3,82/3,51	3,75/3,49
	SCOP			3,97	3,93	3,90	3,92	3,92
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	68/72 (86/91)	68,5/72,5 (86/92)	68,5/73,0 (86/92)	68/71,5 (86/91)	66,5/67,5 (85/87)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	28,58	28,58	28,58	28,58	28,58
	Gas		mm	34,93	41,28	41,28	41,28	41,28
Fan	Type x quantity			Propeller fan x 4	Propeller fan x 4	Propeller fan x 4	Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	315+315	315+315	315+315	315+295	295+295
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	11,7+11,7	11,7+12,4	12,4+12,4	12,4+14,2	14,2+14,2
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1750x740	1858(1798)x1750x740 1858(1798)x1750x740
Net weight			kg	269+269	269+289	289+289	289+335	335+335
Refrigerant	Ref. Charge R410		kg	16	18,8	21,6	21,6	21,6
	CO_2 eq.*6		Tons	33,40	39,25	45,1	45,1	45,1

Technical specifications

MODEL				PURY-P1050YSNW-A1(-BS)	PURY-P1100YSNW-A1(-BS)
HP				42	44
Modules				PURY-P(500+550)YNW-A1	PURY-P(550+550)YNW-A1
Power supply			V/Hz/n°	3-fase 380-415V 50Hz	
Cooling	Capacity (nominal) *1		kW	118,0	124,0
	Power input (nominal)		kW	41,54	45,09
	EER			2,84	2,75
	SEER			5,90	5,77
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	118,0/132,0	124,0/140,0
	Power input (nominal)/ Power input (max)		kW	32,15/38,82	34,63/42,42
	COP/COP max			3,67/3,40	3,58/3,30
	SCOP			3,92	3,92
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	68/73 (86/91)	69/73 (86/92)
Connectable indoor units	Total Capacity			50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/3-50	P10-P250/3-50
Ø Ref. piping diameter	Liquid		mm	34,93	34,93
	Gas		mm	41,28	41,28
Fan	Type x quantity			Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	295+410	410+410
Compressor	Type			Inverter scroll hermetic	
	Motor output		kW	14,2+17,4	17,4+17,4
External dimentions	H(H*5)xWxD		mm	1858(1798)x1750x740 1858(1798)x1750x740	1858(1798)x1750x740 1858(1798)x1750x740
Net weight			kg	335+335	335+335
Refrigerant	Ref. Charge R410		kg	21,6	21,6
	CO_2 eq.*6		Tons	45,1	45,1

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PURY-EP200YNW-A1(-BS)	PURY-EP250YNW-A1(-BS)	PURY-EP300YNW-A1(-BS)	PURY-EP350YNW-A1(-BS)	PURY-EP400YNW-A1(-BS)
HP				8	10	12	14	16
Modules				PURY-EP200YNW-A1	PURY-EP250YNW-A1	PURY-EP300YNW-A1	PURY-EP350YNW-A1	PURY-EP400YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	22.4	28.0	33.5	40.0	45.0
	Power input (nominal)		kW	4.74	6.89	8.17	9.97	13.04
	EER			4.72	4.06	4.10	4.01	3.45
	SEER			7.66	7.23	6.77	6.66	6.63
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	22.4 / 25.0	28.0 / 31.5	33.5 / 37.5	40.0 / 45.0	45.0 / 50.0
	Power input (nominal)/ Power input (max)		kW	4.40 / 5.25	6.18 / 7.37	8.01 / 9.51	9.23 / 11.08	11.42 / 13.58
	COP/COP max			5.09 / 4.76	4.53 / 4.27	4.18 / 3.94	4.33 / 4.06	3.94 / 3.68
	SCOP			4.00	4.24	4.12	4.12	4.12
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	59.0/59.0 (76/78)	60.5/61.0 (78/80)	61.0/67.0 (80/86)	62.5/64.0 (81/83)	65.0/69.0 (83/88)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/1-20	P10-P250/1-25	P10-P250/1-30	P10-P250/1-35	P10-P250/1-40
Ø Ref. piping diameter	Liquid		mm	15.88	19.05	19.05	19.05	22.2
	Gas		mm	19.05	22.2	22.2	28.58	28.58
Fan	Type x quantity			Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	170	185	240	250	315
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	3.6	5.5	7.3	8.7	10.8
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x920x740	1858(1798)x1240x740	1858(1798)x1240x740
Net weight			kg	219	228	230	275	276
Refrigerant	Ref. Charge R410		kg	5,2	5,2	5,2	8	8
	CO_2 eq.*6		Tons	10,85	10,85	10,85	16,70	16,70

Technical specifications

MODEL				PURY-EP450YNW-A1(-BS)	PURY-EP500YNW-A1(-BS)	PURY-EP550YNW-A1(-BS)	PURY-EP400YSNW-A1(-BS)	PURY-EP450YSNW-A1(-BS)
HP				18	20	22	16	18
Modules				PURY-EP450YNW-A1	PURY-EP500YNW-A1	PURY-EP550YNW-A1	PURY-EP(200+200)YNW-A1	PURY-EP(200+250)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	50.0	56.0	63.0	45.0	50.0
	Power input (nominal)		kW	13.85	18.12	22.00	9.82	11.73
	EER			3.61	3.09	2.86	4.58	4.26
	SEER			6.61	6.47	6.21	7.60	7.32
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	50.0 / 56.0	56.0 / 63.0	63.0 / 69.0	45.0 / 50.0	50.0 / 56.0
	Power input (nominal)/ Power input (max)		kW	12.16 / 14.62	14.35 / 17.35	16.55 / 19.71	9.10 / 10.82	10.70 / 12.78
	COP/COP max			4.11 / 3.83	3.90 / 3.63	3.80 / 3.50	4.94 / 4.62	4.67 / 4.38
	SCOP			4.10	4.09	4.09	3.88	4.01
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	65.5/70.0 (83/89)	63.5/64.5 (82/84)	66.0/70.0 (83/89)	62.0/62.0 (79/81)	63.0/63.5 (81/83)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/1-45	P10-P250/1-50	P10-P250/2-50	P10-P250/1-40	P10-P250/1-45
Ø Ref. piping diameter	Liquid		mm	22.2	22.2	22.2	22.2	22.2
	Gas		mm	28.58	28.58	28.58	28.58	28.58
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow		m^3/min	315	295	410	170 + 170	170 + 185
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	11.7	13.8	17.2	3.6 + 3.6	3.6 + 5.5
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740	1858(1798)x1750x740	1858(1798)x1750x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740
Net weight			kg	301	346	346	219 + 219	219 + 228
Refrigerant	Ref. Charge R410		kg	10,8	10,8	10,8	10,4	10,4
	CO_2 eq.*6		Tons	22,55	22,55	22,55	21,71	21,71

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PURY-EP500YSNW-A1(-BS)	PURY-EP550YSNW-A1(-BS)	PURY-EP600YSNW-A1(-BS)	PURY-EP650YSNW-A1(-BS)	PURY-EP700YSNW-A1(-BS)
HP				20	22	24	26	28
Modules				PURY-EP(250+250)YNW-A1	PURY-EP(250+300)YNW-A1	PURY-EP(300+300)YNW-A1	PURY-EP(300+350)YNW-A1	PURY-EP(350+350)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	56.0	63.0	69.0	73.0	80.0
	Power input (nominal)		kW	14.21	15.90	17.33	18.57	20.56
	EER			3.94	3.96	3.98	3.93	3.89
	SEER			7.12	6.85	6.61	6.50	6.52
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	56.0 / 63.0	63.0 / 69.0	69.0 / 76.5	73.0 / 81.5	80.0 / 88.0
	Power input (nominal)/ Power input (max)		kW	12.75 / 15.21	14.92 / 17.33	17.03 / 20.02	17.67 / 21.00	19.04 / 22.33
	COP/COP max			4.39 / 4.14	4.22 / 3.98	4.05 / 3.82	4.13 / 3.88	4.20 / 3.94
	SCOP			4.11	4.05	3.99	3.99	3.99
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	63.5/64.0 (81/83)	64.0/68.0 (83/87)	64.0/70.0 (83/89)	65.0/69.0 (84/88)	65.5/67.0 (84/86)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/1-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	22.2	22.2	22.2	28.58	28.58
	Gas		mm	28.58	28.58	28.58	28.58	34.93
Fan	Type x quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 3	Propeller fan x 4
	Air flow		m^3/min	185 + 185	185 +240	240 + 240	240 + 250	250 + 250
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	5.5 + 5.5	5.5 + 7.3	7.3 + 7.3	7.3 + 8.7	8.7 + 8.7
External dimentions	H(H*5)xWxD		mm	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x920x740	1858(1798)x920x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	228 + 228	228 + 230	230 + 230	230 + 275	275 +275
Refrigerant	Ref. Charge R410		kg	10,4	10,4	10,4	13,2	16
	CO_2 eq.*6		Tons	21,71	21,71	21,71	27,56	33,40

Technical specifications

MODEL				PURY-EP750YSNW-A1(-BS)	PURY-EP800YSNW-A1(-BS)	PURY-EP850YSNW-A1(-BS)	PURY-EP900YSNW-A1(-BS)	PURY-EP950YSNW-A1(-BS)
HP				30	32	34	36	38
Modules				PURY-EP(350+400)YNW-A1	PURY-EP(400+400)YNW-A1	PURY-EP(400+450)YNW-A1	PURY-EP(450+450)YNW-A1	PURY-EP(450+500)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz				
Cooling	Capacity (nominal) *1		kW	85.0	90.0	96.0	101.0	108.0
	Power input (nominal)		kW	23.48	26.86	28.07	28.85	33.23
	EER			3.62	3.35	3.42	3.50	3.25
	SEER			6.49	6.44	6.52	6.56	6.46
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	85.0 / 95.0	90.0 / 100.0	96.0 / 108.0	101.0 / 113.0	108.0 / 119.5
	Power input (nominal)/ Power input (max)		kW	21.19 / 25.33	23.56 / 28.01	24.61 / 29.67	25.31 / 30.37	27.83 / 33.01
	COP/COP max			4.01 / 3.75	3.82 / 3.57	3.90 / 3.64	3.99 / 3.72	3.88 / 3.62
	SCOP			3.99	3.99	3.98	3.97	3.97
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	67.0/70.5 (86/90)	68.0/72.0 (86/91)	68.5/72.5 (86/92)	68.5/73.0 (86/92)	68.0/71.5 (86/91)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	28.58	28.58	28.58	28.58	28.58
	Gas		mm	34.93	34.93	41.28	41.28	41.28
Fan	Type x quantity			Propeller fan x 4	Propeller fan x 4	Propeller fan x 4	Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	250 + 315	315 + 315	315 + 315	315 + 315	315 + 295
Compressor	Type			Inverter scroll hermetic				
	Motor output		kW	8.7 + 10.8	10.8 + 10.8	10.8 + 11.7	11.7 + 11.7	11.7 + 13.8
External dimentions	H(H*5)xWxD		mm	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740	1858(1798)x1240x740 1858(1798)x1240x740
Net weight			kg	275 + 276	276 + 276	276 + 301	301 + 301	301 + 346
Refrigerant	Ref. Charge R410		kg	16	18	18,8	21,6	21,6
	CO_2 eq.*6		Tons	33,40	37,58	39,25	45,1	45,1

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

Technical specifications

MODEL				PURY-EP1000YSNW-A1(-BS)	PURY-EP1050YSNW-A1(-BS)	PURY-EP1100YSNW-A1(-BS)
HP				40	42	44
Modules				PURY-EP(500+500)YNW-A1	PURY-EP(500+550)YNW-A1	PURY-EP(550+550)YNW-A1
Power supply			V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz		
Cooling	Capacity (nominal) *1		kW	113.0	118.0	124.0
	Power input (nominal)		kW	37.66	40.83	44.76
	EER			3.00	2.89	2.77
	SEER			6.34	6.19	6.06
	Temperature operating field	Indoor WB	°C	+15~+24	+15~+24	+15~+24
		Outdoor DB	°C	-5~+52	-5~+52	-5~+52
Heating	Capacity (nominal) *2/ Capacity (max) *3		kW	113.0 / 127.0	118.0 / 132.0	124.0 / 140.0
	Power input (nominal)/ Power input (max)		kW	29.89 / 36.07	31.63 / 38.15	33.60 / 41.17
	COP/COP max			3.78 / 3.52	3.73 / 3.46	3.69 / 3.40
	SCOP			3.96	3.96	3.96
	Temperature operating field	Indoor WB	°C	+15~+27	+15~+27	+15~+27
		Outdoor DB	°C	-20~+15,5	-20~+15,5	-20~+15,5
Sound level *4	Sound pression (Sound power) level		dB(A)	66.5/67.5 (85/87)	68.0/73.0 (86/91)	69.0/73.0 (86/92)
Connectable indoor units	Total Capacity			50-150%	50-150%	50-150%
	Model/Quantity	CITY MULTI		P10-P250/2-50	P10-P250/2-50	P10-P250/2-50
Ø Ref. piping diameter	Liquid		mm	28.58	34.93	34.93
	Gas		mm	41.28	41.28	41.28
Fan	Type x quantity			Propeller fan x 4	Propeller fan x 4	Propeller fan x 4
	Air flow		m^3/min	295 + 295	295 + 410	410 + 410
Compressor	Type			Inverter scroll hermetic		
	Motor output		kW	13.8 + 13.8	13.8 + 17.2	17.2 + 17.2
External dimentions	H(H*5)xWxD		mm	1858(1798)x1750x740 1858(1798)x1750x740	1858(1798)x1750x740 1858(1798)x1750x740	1858(1798)x1750x740 1858(1798)x1750x740
Net weight			kg	346 + 346	346 + 346	346 + 346
Refrigerant	Ref. Charge R410		kg	21,6	21,6	21,6
	CO_2 eq.*6		Tons	45,1	45,1	45,1

*1*2*3 Nominal Conditions:
Cooling conditions: Indoor: 27°C DB / 19°C WB. Outdoor 35°C DB. Piping length 7.5 m, vertical difference 0 m.
Heating conditions: Indoor 20°C DB. Outdoor 7°C DB / 6°C WB. Piping length 7.5 m, vertical difference 0 m.
*2 Eurovent registered
*4 Values measured in anechoic chamber (Cooling mode/Heating mode)
*5 without legs
*6 GWP value of HFC R410A 2088 according to 517 / 2014.
The SEER and SCOP data are based on the EN14825 measurement standard

WY WR2 LINE

OUTDOOR UNITS - Water condensed Heat pump and Heat recovery PQH(R)Y-P Y(S)LM-A1

WEIGHT REDUCED UP TO -44% COMPARED TO PREVIOUS MODEL

WIDER LINEUP INTRODUCING 14HP SIZE

SINGLE MODULE UP TO SIZE 24HP FOR EASIER INSTALLATION AND LESS ENCUMBRANCE

HIGHER EFFICIENCY THAN PREVIOUS MODEL (UP TO +20% EER AND +34% COP)

NEW CASE IN SMALL AND LARGE VERSIONS

EVAPORATING TEMPERATURE CONTROL (ETC) FEATURE AVAILABLE

WATER FLOW AUTOMATIC CONTROL WITH 0-10V INPUT

FOR SIZES P700-P900 (28-36HP) REDUCED OCCUPIED SURFACE.

*1 Values referring to the model PQHY-P600 YSLM-A compared to the same size as the previous series
*2 Value referred to the model P400 compared with the same size as the previous model

New Small and Large case

New water condensed oudoor units WY and WR2 are available in two module types: Small and Large. Large module allows capacity up to 24HP (69 kW in Cooling and 76,5 kW in Heating) with just one module, reducing occupied surface in installation site up to 50% compared to previous model. For double module configuration room saving can be up to 33%.

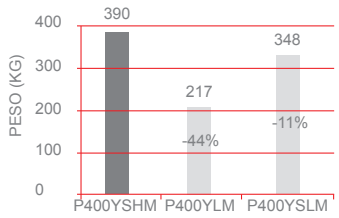
Weight reduction

A significant weight reduction compared to previous model, up to 44% with Large module, allows an easier installation and transportation of the unit.

Higher energy efficiency

New WY and WR2 model grants top of the class EER and COP performances. Energy efficiency has been improved for both single and double module, in Cooling and Heating, up to +34%. This type of systems are among the most effiencient in the world, thanks to high performances and constant temperature attributes of geothermal application.

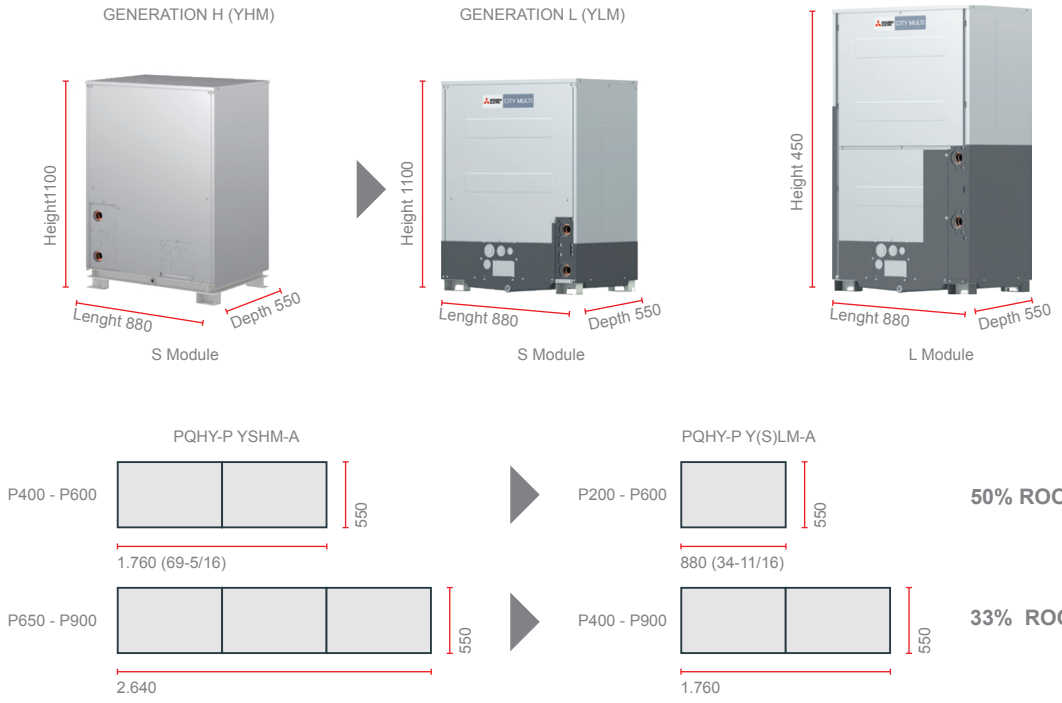
WEIGHT REDUCTION



	PQHY		PQRY	
	Y(S)HM	Y(S)LM	Y(S)HM	Y(S)LM
P200	195	174	181	172
P250	195	174	181	172
P300	195	174	181	172
P350	-	217	-	216
P400	390	217*1	362	216*1
		348		344*2
P450	390	217*1	362	216*1
		348		344*2
P500	390	217*1	362	216*1
		348		344*2
P550	390	246*1	362	246*1
		348*2		344*2
P600	390	246*1	362	246*1
		348*2		344*2
P700	585	434	-	432
P750	585	434	-	432
P800	585	434	-	432
P850	585	434	-	432
P900	585	434	-	432

*1 Single module
*2 Double module

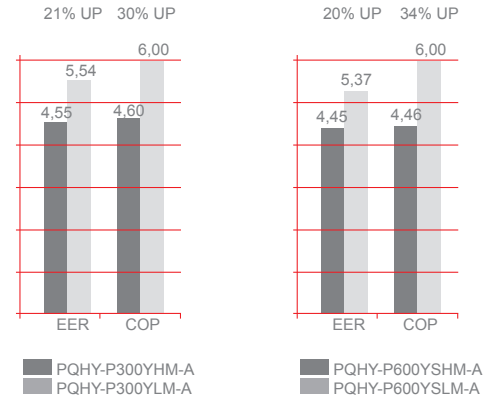
NEW CASE



Water flow rate control

New YLM water condensed outdoor units are equipper with an automatic flow rate control system, which allows reduction of pumping consumption when the system works in partial load conditions. Flow rate control is performed by a 0-10V signal, which controls the regulation valve by shutting or opening it (field supplied).
Thanks to factory setting water circulation pumping is performed even during temporary blackout.

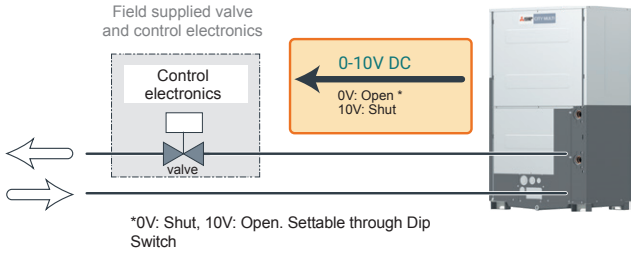
HIGHER ENERGY EFFICIENCY



Advantages

WY and WR2 lines VRF CITY MULTI systems have all the benefits of the Y series, using water evaporation condensing units. Water heat source condensing units offer the advantage of being installable inside the building, for even greater installation flexibility with practically no limitations for the dimensions of the infrastructure. Depending on the capacity of the outdoor unit, up to 26 indoor units can be connected to a single condensing unit, while up to 50 indoor units can be connected to a modular system with individual user and/or centralized control. The two-pipe system allows the system to transition from heating to cooling mode and vice versa, for superior comfort in all zones.

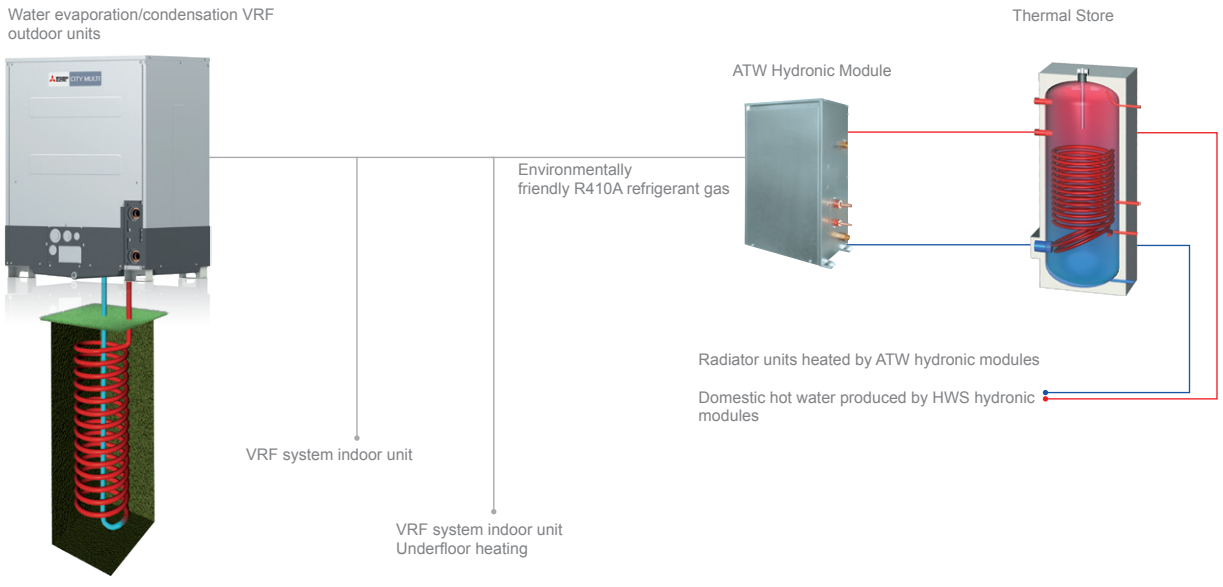
WATER FLOW RATE CONTROL



Geothermal applications

WY and WR2 lines outdoor units are perfectly suited for geothermal applications as they use water as the thermal medium fluid which, at depths from 10 m below ground, maintains a practically constant temperature with no significant excursions all year round.
A geothermal installation uses the ground as a heat source in winter and as a heat sink in summer. Using geothermal probes (heat exchangers) together with VRF CITY MULTI WY and WR2 systems, heat may be extracted from the ground to warm in winter, and dissipated into the ground to cool in summer.

GEOTHERMAL SYSTEM COMBINED WITH VRF CITY MULTI WY WATER SOURCE SYSTEM



Key Technologies





Technical specifications WY LINE

MODEL Single				PQHY-P200YLM-A1	PQHY-P250YLM-A1	PQHY-P300YLM-A1
HP				8	10	12
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3-phase 380-400-415V 50Hz		
Cooling	Capacity*1		kW	22.4	28.0	33.5
	Power input		kW	3.71	4.90	6.04
	EER			6.03	5.71	5.54
	SEER			8.12	8.16	7.42
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	25.0	31.5	37.5
	Power input		kW	3.97	5.08	6.25
	COP			6.29	6.20	6.00
	SCOP			4.90	4.61	4.55
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	46	48	54
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/1~17	P15~P250/1~21	P15~P250/1~26
Ø Ref. piping	Liquid		mm	9.52	9.52	9.52
	Gas			19.05	22.2	22.2
Circulating Water	Flow rate		m^3/h	5.76	5.76	5.76
	Operating volume range			3.0~7.2	3.0~7.2	3.0~7.2
	Pressure drop		kPa	24	24	24
	Heat exchanger volume		l	5	5.0	5.0
External dimentions			mm	1100 x 880 x 550	1100 x 880 x 550	1100 x 880 x 550
Net weight			kg	174	174	174
Ref. Charge R410*4/CO_2 Eq			kg/Tons	5.0 / 10.44	5.0 / 10.44	5.0 / 10.44

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Water temperature 30°C. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Water temperature 20°C. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.

Technical specifications WY LINE

MODEL Single				PQHY-P350YLM-A1	PQHY-P400YLM-A1	PQHY-P450YLM-A1	PQHY-P500YLM-A1	PQHY-P550YLM-A1	PQHY-P600YLM-A1
HP				14	16	18	20	22	24
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3-phase 380-400-415V 50Hz					
Cooling	Capacity*1		kW	40.0	45.0	50.0	56.0	63.0	69.0
	Power input		kW	7.14	8.03	9.29	11.17	12.54	14.49
	EER			5.60	5.60	5.38	5.01	5.02	4.76
	SEER			7.44	7.40	6.62	6.30	6.89	6.89
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	45.0	50.0	56	63.0	69.0	76.5
	Power input		kW	7.53	8.37	9.79	11.43	12.27	14.51
	COP			5.97	5.97	5.72	5.51	5.62	5.27
	SCOP			4.29	4.25	4.17	4.04	3.77	3.51
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	52	52	54	54	56.5	56.5
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/1~30	P15~P250/1~34	P15~P250/1~39	P15~P250/1~43	P15~P250/2~47	P15~P250/2~50
Ø Ref. piping	Liquid		mm	12.7	15.88	15.88	15.88	15.88	15.88
	Gas			28.58	28.58	28.58	28.58	28.58	28.58
Circulating Water	Flow rate		m^3/h	7.20	7.20	7.20	7.20	11.52	11.52
	Operating volume range			4.5~11.6	4.5~11.6	4.5~11.6	4.5~11.6	6.0~14.4	6.0~14.4
	Pressure drop		kPa	44	44	44	44	45	45
	Heat exchanger volume		l	5.0	5.0	5.0	5.0	5.0	5.0
External dimentions			mm	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550
Net weight			kg	217	217	217	217	246	246
Ref. Charge R410*4/CO_2 Eq			kg/Tons	6.0 / 12.53	6.0 / 12.53	6.0 / 12.53	6.0 / 12.53	11.7 / 24.43	11.7 / 24.43

Technical specifications WY LINE

MODEL Double				PQHY-P400YSLM-A1	PQHY-P450YSLM-A1	PQHY-P500YSLM-A1	PQHY-P550YSLM-A1	PQHY-P600YSLM-A1
HP				16	18	20	22	24
Modules				PQHY-P200YLM-A PQHY-P200YLM-A	PQHY-P250YLM-A PQHY-P200YLM-A	PQHY-P250YLM-A PQHY-P250YLM-A	PQHY-P300YLM-A PQHY-P250YLM-A	PQHY-P300YLM-A PQHY-P300YLM-A
Twinning joint				CMY-Y100VBK3				
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3 phase 380-400-415V 50Hz				
Cooling	Capacity*1		kW	45.0	50.0	56.0	63.0	69.0
	Power input		kW	7.70	8.78	10.12	11.55	12.84
	EER			5.84	5.69	5.53	5.45	5.37
	SEER			-	-	-	-	-
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	50.0	56.0	63.0	69.0	76.5
	Power input		kW	7.94	8.97	10.16	11.31	12.75
	COP			6.29	6.24	6.20	6.10	6.0
	SCOP			-	-	-	-	-
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	49	50	51	55	57
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/1~34	P15~P250/1~39	P15~P250/1~43	P15~P250/2~47	P15~P250/2~50
Ø Ref. piping	Liquid/Gas		mm	15.88/28.58	15.88/28.58	15.88/28.58	15.88/28.58	15.88/28.58
Circulating Water	Flow rate		m^3/h	5.76+5.76	5.76+5.76	5.76+5.76	5.76+5.76	5.76+5.76
	Operating volume range			3+3~7.2+7.2	3+3~7.2+7.2	3+3~7.2+7.2	3+3~7.2+7.2	3+3~7.2+7.2
	Pressure drop		kPa	24+24	24+24	24+24	24+24	24+24
	Heat exchanger volume		l	5.0+5.0	5.0+5.0	5.0+5.0	5.0+5.0	5.0+5.0
External dimentions			mm	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550
Net weight			kg	174+174	174+174	174+174	174+174	174+174
Ref. Charge R410*4/CO_2 Eq			kg/Tons	5.0+5.0/20.88	5.0+5.0/20.88	5.0+5.0/20.88	5.0+5.0/20.88	5.0+5.0/20.88

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Water temperature 30°C. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Water temperature 20°C. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.

Technical specifications WY LINE

MODEL Double				PQHY-P700YSLM-A1	PQHY-P750YSLM-A1	PQHY-P800YSLM-A1	PQHY-P850YSLM-A1	PQHY-P900YSLM-A1
HP				28	30	32	34	36
Modules				PQHY-P350YLM-A PQHY-P350YLM-A	PQHY-P400YLM-A PQHY-P350YLM-A	PQHY-P400YLM-A PQHY-P400YLM-A	PQHY-P450YLM-A PQHY-P400YLM-A	PQHY-P450YLM-A PQHY-P450YLM-A
Twinning joint				CMY-Y200VBK2				
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3 phase 380-400-415V 50Hz				
Cooling	Capacity*1		kW	80.0	85.0	90.0	96.0	101.0
	Power input		kW	14.73	15.64	16.57	18.03	19.38
	EER			5.43	5.43	5.43	5.32	5.21
	SEER			-	-	-	-	-
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	50.0	56.0	63.0	69.0	76.5
	Power input		kW	7.94	8.97	10.16	11.31	12.75
	COP			6.29	6.24	6.20	6.10	6.0
	SCOP			-	-	-	-	-
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	55	55	55	56	57
Connectable indoor units	Total capacity			50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity	50 to 130% of O.U. capacity
	Model/Quantity			P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping	Liquid(Gas		mm	19.05/34.93	19.05/34.93	19.05/34.93	19.05/41.28	19.05/41.28
Circulating Water	Flow Rate		m^3/h	7.20+7.20	7.20+7.20	7.20+7.20	7.20+7.20	7.20+7.20
	Operating volume range			4.5+4.5~11.6+11.6	4.5+4.5~11.6+11.6	4.5+4.5~11.6+11.6	4.5+4.5~11.6+11.6	4.5+4.5~11.6+11.6
	Pressure drop		kPa	44+44	44+44	44+44	44+44	44+44
	Heat exchanger volume		l	5.0+5.0	5.0+5.0	5.0+5.0	5.0+5.0	5.0+5.0
External dimentions			mm	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550
Net weight			kg	217+217	217+217	217+217	217+217	217+217
Ref. Charge R410*4/CO_2 Eq			kg/Tons	6.0+6.0/25.06	6.0+6.0/25.06	6.0+6.0/25.06	6.0+6.0/25.06	6.0+6.0/25.06

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Water temperature 30°C. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Water temperature 20°C. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.

Technical specifications WR2 LINE

MODEL Single				PQRY-P200YLM-A1	PQRY-P250YLM-A1	PQRY-P300YLM-A1
HP				8	10	12
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3 phase 380-400-415V 50Hz		
Cooling	Capacity*1		kW	22.4	28.0	33.5
	Power input		kW	3.71	4.90	6.04
	EER			6.03	5.71	5.54
	SEER			7.91	7.99	7.30
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	25.0	31.5	37.5
	Power input		kW	3.97	5.08	6.25
	COP			6.29	6.20	6.00
	SCOP			4.90	4.61	4.55
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	46	48	54
Connectable indoor units	Total capacity			50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity
	Model/Quantity			P15~P250/1~20	P15~P250/1~25	P15~P250/1~30
Ø Ref. piping	Liquid		mm	15.88	19.05	19.05
	Gas		mm	19.05	22.2	22.2
Circulating Water	Flow Rate		m^3/h	5.76	5.76	5.76
	Operating volume range			3.0~7.2	3.0~7.2	3.0~7.2
	Pressure drop		kPa	24	24	24
	Heat exchanger volume		l	5.0	5.0	5.0
External dimentions			mm	1100 x 880 x 550	1100 x 880 x 550	1100 x 880 x 550
Net weight			kg	172	172	172
Ref. Charge R410*4/CO_2 Eq			kg/Tons	5.0 /10.44	5.0 /10.44	5.0 /10.44

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Water temperature 30°C. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Water temperature 20°C. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014.

Technical specifications WR2 LINE

MODEL Single				PQRY-P350YLM-A1	PQRY-P400YLM-A1	PQRY-P450YLM-A1	PQRY-P500YLM-A1	PQRY-P550YLM-A1	PQRY-P600YLM-A1
HP				14	16	18	20	22	24
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3 phase 380-400-415V 50Hz					
Cooling	Capacity*1		kW	40.0	45.0	50.0	56.0	63.0	69.0
	Power input		kW	7.14	8.03	9.29	11.17	12.54	14.49
	EER			5.60	5.60	5.38	5.01	5.02	4.76
	SEER			7.34	7.31	6.56	6.25	6.84	6.84
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	45.0	50.0	56.0	63.0	69.0	76.5
	Power input		kW	7.53	8.37	9.79	11.43	12.27	14.51
	COP			5.97	5.97	5.72	5.51	5.62	5.27
	SCOP			4.29	4.25	4.17	4.04	3.77	3.51
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	52	52	54	54	56.5	56.5
Connectable indoor units	Total capacity			50 to 150% of O.U. capacity					
	Model/Quantity			P15~P250/1~35	P15~P250/1~40	P15~P250/1~45	P15~P250/1~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping	Liquid		mm	22.2	22.2	22.2	22.2	22.2	22.2
	Gas		mm	28.58	28.58	28.58	28.58	28.58	34.93
Circulating Water	Flow Rate		m^3/h	7.20	7.20	7.20	7.20	11.52	11.52
	Operating volume range			4.5~11.6	4.5~11.6	4.5~11.6	4.5~11.6	6.0~14.4	6.0~14.4
	Pressure drop		kPa	44	44	44	44	45	45
	Heat exchanger volume		l	5	5	5	5	10	10
External dimentions			mm	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550
Net weight			kg	216	216	216	216	246	246
Ref. Charge R410*4/CO_2 Eq			kg/Tons	6.0 /12.53	6.0 /12.53	6.0 /12.53	6.0 /12.53	11.7/24.43	11.7/24.43

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Water temperature 30°C. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Water temperature 20°C. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014

Technical specifications WR2 LINE

MODEL Double				PQRY-P400YSLM-A1	PQRY-P450YSLM-A1	PQRY-P500YSLM-A1	PQRY-P550YSLM-A1	PQRY-P600YSLM-A1
HP				16	18	20	22	24
Modules				PQRY-P200YLM-A PQRY-P200YLM-A	PQRY-P250YLM-A PQRY-P200YLM-A	PQRY-P250YLM-A PQRY-P250YLM-A	PQRY-P300YLM-A PQRY-P250YLM-A	PQRY-P300YLM-A PQRY-P300YLM-A
Twinning joint				CMY-Q100VBK				
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3-phase 380-400-415V 50Hz				
Cooling	Capacity*1		kW	45.0	50.0	56.0	63.0	69.0
	Power input		kW	7.70	8.78	10.12	11.55	12.84
	EER			5.84	5.69	5.53	5.45	5.37
	SEER			-	-	-	-	-
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	50.0	56.0	63.0	69.0	76.5
	Power input		kW	7.94	8.97	10.16	11.31	12.75
	COP			6.29	6.24	6.20	6.10	6.00
	SCOP			-	-	-	-	-
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	49	50	51	55	57
Connectable indoor units	Total capacity			50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity
	Model/Quantity			P15~P250/1~40	P15~P250/1~45	P15~P250/1~50	P15~P250/1~50	P15~P250/2~50
Ø Ref. piping	Liquid/Gas		mm	22.2/28.58	22.2/28.58	22.2/28.58	22.2/28.58	22.2/34.93
Circulating Water	Flow Rate		m^3/h	5.76 + 5.76	5.76 + 5.76	5.76 + 5.76	5.76 + 5.76	5.76 + 5.76
	Operating volume range			3+3 ~ 7.2+7.2	3+3 ~ 7.2+7.2	3+3 ~ 7.2+7.2	3+3 ~ 7.2+7.2	3+3 ~ 7.2+7.2
	Pressure drop		kPa	24 + 24	24 + 24	24 + 24	24 + 24	24 + 24
	Heat exchanger volume		l	5.0 + 5.0	5.0 + 5.0	5.0 + 5.0	5.0 + 5.0	5.0 + 5.0
External dimentions			mm	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550	1100 x 880 x 550 1100 x 880 x 550
Net weight			kg	172+172	172+172	172+172	172+172	172+172
Ref. Charge R410*4/CO_2 Eq			kg/Tons	5.0+5.0 /20.88	5.0+5.0 /20.88	5.0+5.0 /20.88	5.0+5.0 /20.88	5.0+5.0 /20.88

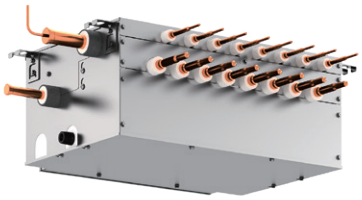
Technical specifications WR2 LINE

MODEL Double				PQRY-P700YSLM-A1	PQRY-P750YSLM-A1	PQRY-P800YSLM-A1	PQRY-P850YSLM-A1	PQRY-P900YSLM-A1
HP				28	30	32	34	36
Modules				PQRY-P350YLM-A PQRY-P350YLM-A	PQRY-P400YLM-A PQRY-P350YLM-A	PQRY-P400YLM-A PQRY-P400YLM-A	PQRY-P450YLM-A PQRY-P400YLM-A	PQRY-P450YLM-A PQRY-P450YLM-A
Twinning joint				CMY-Q100VBK				
Power supply	Phases/Voltage/Freq.		V/Hz/n°	3-phase 380-400-415V 50Hz				
Cooling	Capacity*1		kW	80.0	85.0	90.0	96.0	101.0
	Power input		kW	14.73	15.64	16.57	18.03	19.38
	EER			5.43	5.43	5.43	5.32	5.21
	SEER			-	-	-	-	-
	Temperature operating field	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Capacity*2		kW	88	95.0	100.0	108.0	113.0
	Power input		kW	14.73	15.90	16.75	18.49	19.74
	COP			5.97	5.97	5.97	5.84	5.72
	SCOP			-	-	-	-	-
	Temperature operating field	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Water	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound power level*3			dB(A)	55	55	55	56	57
Connectable indoor units	Total capacity			50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity	50 to 150% of O.U. capacity
	Model/Quantity			P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Ø Ref. piping	Liquid/Gas		mm	28.58/34.93	28.58/34.93	28.58/34.93	28.58/41.28	28.58/41.28
Circulating Water	Flow Rate		m^3/h	7.20 + 7.20	7.20 + 7.20	7.20 + 7.20	7.20 + 7.20	7.20 + 7.20
	Operating volume range			4.5+4.5 ~ 11.6+11.6	4.5+4.5 ~ 11.6+11.6	4.5+4.5 ~ 11.6+11.6	4.5+4.5 ~ 11.6+11.6	4.5+4.5 ~ 11.6+11.6
	Pressure drop		kPa	44 + 44	44 + 44	44 + 44	44 + 44	44 + 44
	Heat exchanger volume		l	5.0 + 5.0	5.0 + 5.0	5.0 + 5.0	5.0 + 5.0	5.0 + 5.0
External dimentions			mm	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550	1450 x 880 x 550 1450 x 880 x 550
Net weight			kg	216 + 216	216 +216	216 + 216	216 +216	216 + 216
Ref. Charge R410*4/CO_2 Eq			kg/Tons	6.0+6.0 /25.06	6.0 + 6.0 /25.06	6.0 + 6.0 /25.06	6.0 + 6.0 /25.06	6.0 + 6.0 /25.06

*1 Nominal cooling conditions: Indoor: 27°C DB / 19°C WB. Water temperature 30°C. Piping length 7.5 m, vertical difference 0 m.
*2 Nominal heating conditions: Indoor 20°C DB. Water temperature 20°C. Piping length 7.5 m, vertical difference 0 m.
*3 Values measured in anechoic chamber.
*4 GWP value of HFC R410A 2088 according to 517 / 2014

BC CONTROLLERS FOR R2 LINES

CMB-M V-J1/V-JA1/V-KB1, CMB-P V-KA1



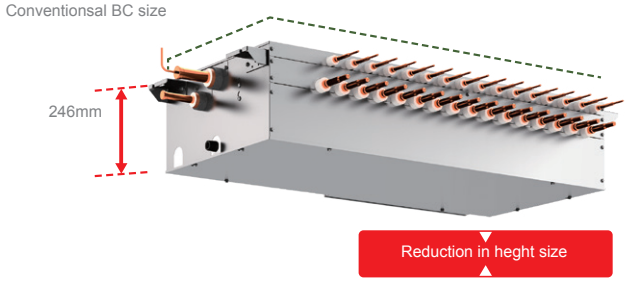
BC Distributors

The new BC distributor of the CMB-P(M)-V-J(1) series effectively distributes the refrigerant depending on the operating mode of the indoor units (heating or cooling). It contains the highly efficient gas/liquid separator developed by Mitsubishi Electric and carefully separates the gas for heating from the cooling liquid. For a greater height difference and an increase in the maximum pipe length, it uses a subcooling heat exchanger that further chills the coolant destined for the indoor units in cooling mode.

New BC controller

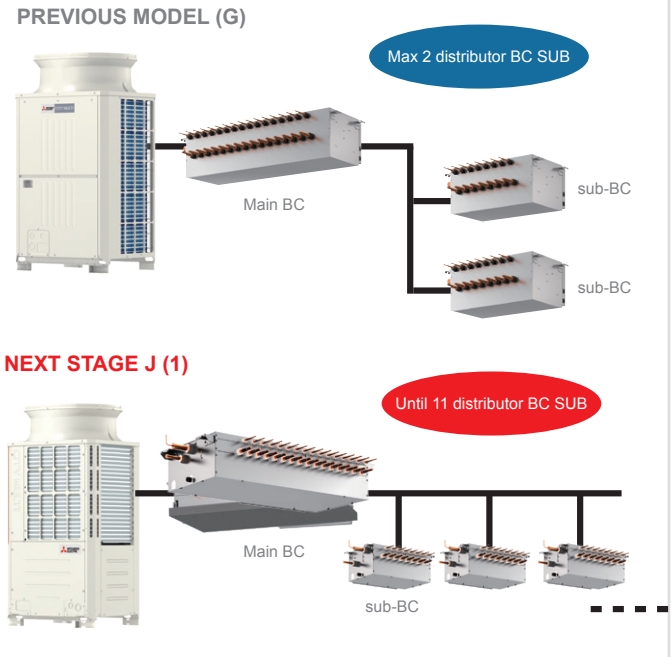
Increased number of connections (for systems with BC SUB distributor) and increase of geometric limits. In the R2 heat recovery systems of the new YNW-A1 line it is possible to connect up to 11 BC SUB distributors to the BC MAIN distributor thus allowing greater configuration flexibility. The adoption of the
new architecture allows a reduction of the refrigerant charge adopted in the system.

Reduced height



The new BC distributor can also be installed in false ceilings with limited heights thanks to a 40.5 mm lower average height (compared to the previous model (G)).

SYSTEM LAYOUT R2



Greater flexibility in system configuration

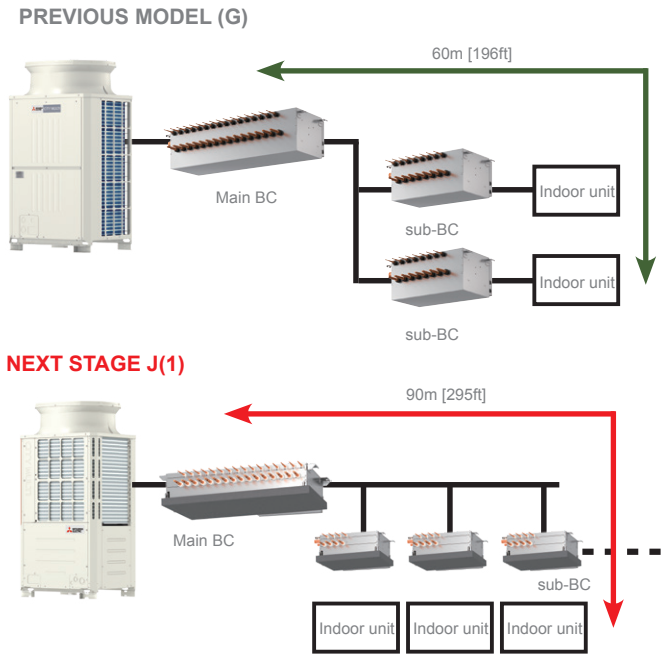
The maximum length of the refrigeration line between the BC MAIN distributor unit and the indoor unit has been increased to 90 metres* (compared to 60 metres for the previous model) for greater flexibility of system design.

*If the indoor unit is connected to an SUB BC Controller unit

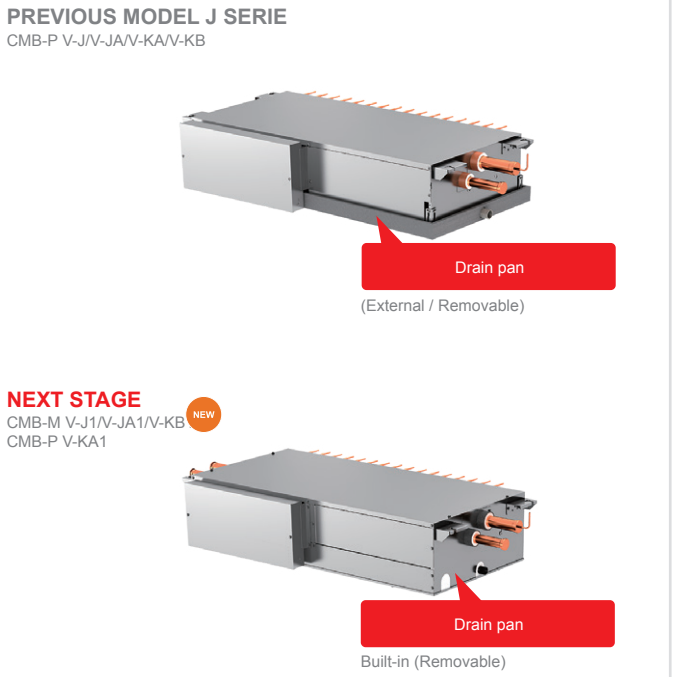
Greater accessibility and ease of maintenance

In the previous model, the drainage panel was on the lower side of the distributor. In the new model it is instead installed on the lower side of the structure, making it easy to remove from the lower part for maintenance access.

GREATER FLEXIBILITY IN SYSTEM CONFIGURATION



GREATER ACCESSIBILITY AND EASE OF MAINTENANCE

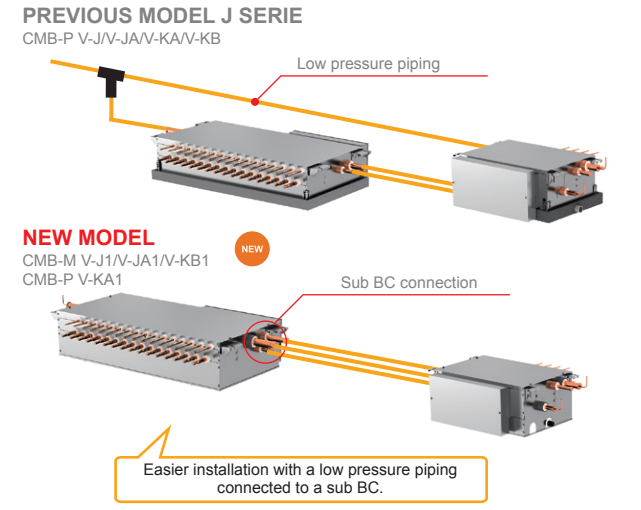


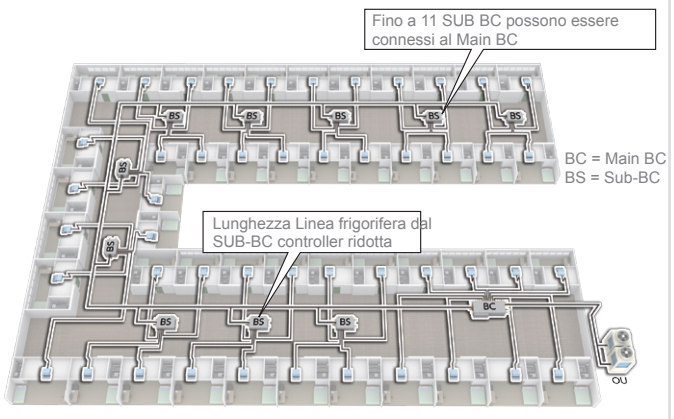
Sub-BC controller connections increased

Only two sub-BC controllers could be connected to a main BC controller in previous models. Up to 11 sub-BC controllers can now be connected to the new BC controller, allowing for more flexibility in system design. The line-branching method enables the creation of system designs that use less refrigerant.

The line-branching method with a main BC controller and sub-BC controllers

The sub-BC controller can be installed near the indoor units, so the branch piping can be greatly reduced. This also reduces the length of system piping, enabling using less refrigerant design.





Technical specifications

MODEL Single				CMB-M104V-J1	CMB-M106V-J1	CMB-M108V-J1	CMB-M1012V-J1	CMB-M1016V-J1
Number of branch				4	6	8	12	16
Power source				1-phase 220-230-240 V				
Power input	kW	50Hz	Cooling	0.067/0.076/0.085	0.097/0.110/0.123	0.127/0.144/0.161	0.186/0.211/0.236	0.246/0.279/0.312
			Heating	0.030/0.034/0.038	0.045/0.051/0.057	0.060/0.068/0.076	0.090/0.102/0.114	0.119/0.135/0.151
Indoor unit capacity connectable to 1 branch				Model P80 or smaller (Use optional joint pipe combing 2 branches when the total unit capacity exceeds P81.)				
Connectable outdoor/heat source unit capacity				P200 to P350				
Height	mm			250	250	250	252	252
Width	mm			596	596	596	911	1,135
Depth	mm			476	476	476	622	622
Refrigerant piping diameter	To outdoor/heat source unit			Connectable unit capacity				
				P200	P250/P300		P350	
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed		19.05 (3/4) Brazed or 22.2 (7/8) Brazed	
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed		28.58 (1-1/8) Brazed	
	To indoor unit	Liquid pipe		Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed				
		Gas pipe		Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed (19.05 (3/4), 22.2(7/8) with optional joint pipe used.)				
Drain pipe	mm (in.)			O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)
Net weight	kg (lbs)			26 (58)	29 (64)	33 (73)	49 (109)	59 (131)

Technical specifications

MODEL Main				CMB-M108V-JA1			CMB-M1012V-JA1			CMB-M1016V-JA1		
Number of branch				8			12			16		
Power source				1-phase 220-230-240 V								
Power input	kW	50Hz	Cooling	0.127/0.144/0.161			0.186/0.211/0.236			0.246/0.279/0.312		
			Heating	0.060/0.068/0.076			0.090/0.102/0.114			0.119/0.135/0.151		
Indoor unit capacity connectable to 1 branch				Model P80 or smaller (Use optional joint pipe combing 2 branches when the total unit capacity exceeds P81.)								
Connectable outdoor/heat source unit capacity				P200 to P900								
Height	mm			252			252			252		
Width	mm			911			1,135			1,135		
Depth	mm			622			622			622		
Refrigerant piping diameter	To outdoor/heat source unit			Connectable unit capacity								
				P200	P250/P300	P350	P400 to P500	P550	P600	P650	P700 to P800	P850 to P900
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed or 22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed or 28.58 (1-1/8) Brazed	22.2 (7/8) Brazed or 28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed or 34.93 (1-3/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28 (1-5/8) Brazed
	To indoor unit	Liquid pipe		Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed								
		Gas pipe		Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed (19.05 (3/4), 22.2 (7/8) with optional joint pipe used.)								
	To other BC controller			Total down-stream Indoor unit capacity								
				to P200	P201 to P300	P301 to P350	P351 to P400	P401 to P600	P601 to P650	P651 to P800	P801 to P1000	P1001 or above
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed
	Liquid pipe			9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
Drain pipe	mm (in.)			O.D. 32 (1-1/4)			O.D. 32 (1-1/4)			O.D. 32 (1-1/4)		
Net weight	kg (lbs)			48 (106)			60 (133)			68 (150)		

★ Combination chart of BC Controller for R2 series (YNW)

	P200-P350	P400-P900	P950-P1100
CMB-M VJ1	•	N/A	N/A
CMB-M V-JA1	•	•	N/A
CMB-P V-KA1	•	•	•
CMB-M V-KB1 (Sub)	CMB-M108/1012/1016V-JA1, CMB-P1016V-KA1		

Technical specifications

MODEL Main				CMB-P1016V-KA1								
Number of branch				16								
Power source				1-phase 220-230-240 V								
Power input	kW	50Hz	Cooling	0.246/0.279/0.312								
			Heating	0.119/0.135/0.151								
Indoor unit capacity connectable to 1 branch				Model P80 or smaller (Use optional joint pipe combing 2 branches when the total unit capacity exceeds P81.)								
The maximum number of connectable Sub BC controllers				-								
The maximum connectable capacity of indoor units				-								
Connectable outdoor/heat source unit capacity				P200 to P1100								
Connectable Main BC controller				-								
Height	mm			250								
Width	mm			1,135								
Depth	mm			622								
Refrigerant piping diameter	To outdoor/heat source unit			Connectable unit capacity								
				P200	P250/P300	P350	P400 to P500	P550	P600	P650	P700 to P800	P850 to P1000
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed or 22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed or 28.58 (1-1/8) Brazed	22.2 (7/8) Brazed or 28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed or 34.93 (1-3/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28(1-5/8) Brazed
	To indoor unit	Liquid pipe		Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed								
		Gas pipe		Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed (19.05 (3/4), 22.2 (7/8) with optional joint pipe used.)								
	To other BC controller			Total down-stream Indoor unit capacity								
				to P200	P201 to P300	P301 to P350	P351 to P400	P401 to P600	P601 to P650	P651 to P800	P801 to P1000	P1001 or above
	High press. pipe			15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed
	Low press. pipe			19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28(1-5/8) Brazed	41.28(1-5/8) Brazed
	Liquid pipe			9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
Drain pipe	mm (in.)			O.D. 32 (1-1/4)								
Net weight	kg (lbs)			69 (153)								

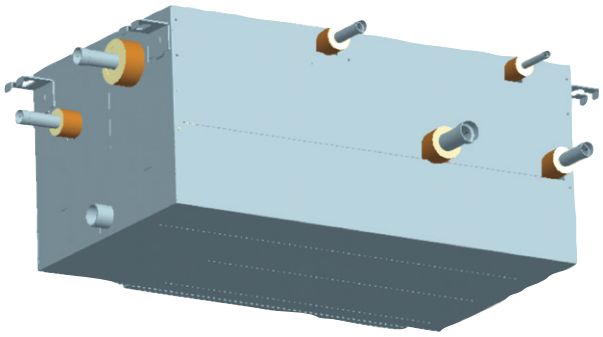
Technical specifications

MODEL Sub					CMB-M104V-KB1								
Number of branch					4								
Power source					1-phase 220-230-240 V								
Power input	kW	50Hz	Cooling		0.060/0.068/0.076								
			Heating		0.030/0.034/0.038								
The maximum number of connectable Sub BC controllers					11								
The maximum connectable capacity of indoor units					P350 for each								
Connectable Main BC controller					CMB-M108/1012/1016V-JA1, CMB-P1016V-KA1								
Height	mm				250								
Width	mm				596								
Depth	mm				476								
Refrigerant piping diameter	To outdoor/heat source unit				-								
					-								
	High press. pipe				-								
	Low press. pipe				-								
	To indoor unit	Liquid pipe			Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed								
		Gas pipe			Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed (19.05 (3/4) with optional joint pipe used.)								
	To other BC controller				Total down-stream Indoor unit capacity								
					to P200	P201 to P300	P301 to P350	P351 to P400	P401 to P600	P601 to P650	P651 to P800	P801 to P1000	P1001 or above
	High press. pipe				15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed
	Low press. pipe				19.05 (3/4) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	41.28(1-5/8) Brazed	41.28(1-5/8) Brazed
	Liquid pipe				9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
Drain pipe	mm (in.)				O.D. 32 (1-1/4)								
Net weight	kg (lbs)				23 (51)								

Technical specifications

MODEL Sub					CMB-M108V-KB1								
Number of branch					8								
Power source					1-phase 220-230-240 V								
Power input	kW	50Hz	Cooling		0.119/0.135/0.151								
			Heating		0.060/0.068/0.076								
The maximum number of connectable Sub BC controllers					11								
The maximum connectable capacity of indoor units					P350 for each								
Connectable Main BC controller					CMB-M108/1012/1016V-JA1, CMB-P1016V-KA1								
Height	mm				246								
Width	mm				596								
Depth	mm				495								
Refrigerant piping diameter	To outdoor/heat source unit				-								
					-								
	High press. pipe				-								
	Low press. pipe				-								
	To indoor unit	Liquid pipe			Indoor unit Model 50 or smaller 6.35 (1/4) Brazed bigger than 50 9.52 (3/8) Brazed								
		Gas pipe			Gas pipe Indoor unit Model 50 or smaller 12.7 (1/2) Brazed bigger than 50 15.88 (5/8) Brazed(19.05 (3/4) with optional joint pipe used.)								
	To other BC controller				Total down-stream Indoor unit capacity								
					to P200	P201 to P300	P301 to P350	P351 to P400	P401 to P600	P601 to P650	P651 to P800	P801 to P1000	P1001 or above
	High press. pipe				15.88	19.05	19.05	22.2	22.2	28.58	28.58	28.58	34.93
	Low press. pipe				19.05	22.2	28.58	28.58	28.58	28.58	34.93	41.28	41.28
	Liquid pipe				9.52	9.52	12.7	12.7	15.88	15.88	19.05	19.05	19.05
Drain pipe	mm (in.)				O.D. 32 (1-1/4)								
Net weight	kg (lbs)				31 (69)								

WCB WATER-REFRIGERANT CONNECTION BOX



CMB-PW202V-J

WCB refrigerant – water connection box

The WCB refrigerant-water connection box is effectively a simplified BC controller. The WCB has 2 branches only (standard indoor units / PWFY) and is specifically intended to permit air cooling functionality via the 'indoor unit' branch and domestic and heating hot water production functionality via the 'PWFY' branch. While the WCB does not permit simultaneous heating and cooling operation of the indoor units connected to the 'indoor unit' branch, it does allow heat recovery in summer between the two branches, for practically free domestic hot water production.

The WCB water connection box may be used to feed a mixed R2 system (HWS and ATW hydronic modules in combination with standard indoor units), allowing the following scenarios:

	ATW	HWS	Indoor Units
	Primary heating with underfloor system	Domestic hot water production	Air cooling or heating
Winner	ON	ON	OFF
Autumn / Spring	OFF	ON	ON
Summer	OFF	ON	ON

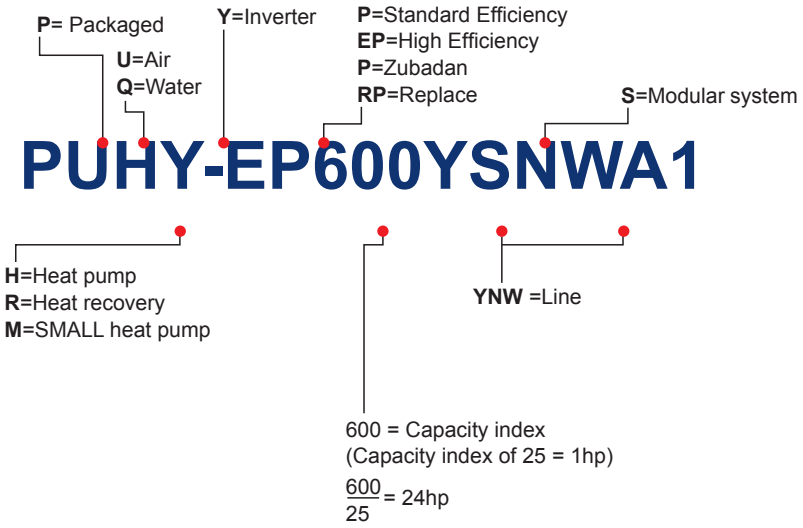
Technical specifications

MODEL			CMB-PW202V-J
Number of branches			2
Power	Voltage/Freq./Phases	V/Hz/n°	1 phase 220-230-240V 50 Hz/60Hz
Power absorption		kW	0.020
External finish			Galvanized
Capacity of connectable indoor unit		Total	50~130% of outdoor unit capacity
Indoor unit branch			Up to 130% of outdoor unit capacity
PWFY branch			Up to 100% of outdoor unit capacity
Connectable outdoor units			PURY-(E)P200/250/300YNW / PQRY-P200/250/300YLM
Dimensions (HxLxW)		mm	284 x 648 x 432
Drain pipe			28.58 brazed
Net weight		kg	20

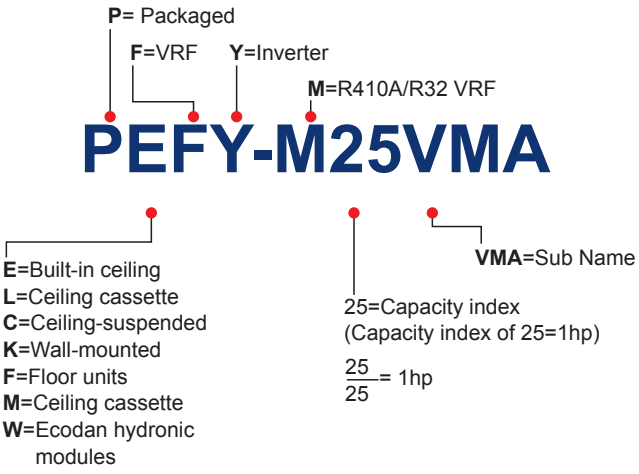
			CONNECTIONS			
Refrigerant pipe diameter	To outdoor unit		See capacity of connectable outdoor unit			
			P200	P250-P300		
		High press. pipe.	15.88	19.05		
		Low press. pipe.	19.05	22.2		
	To indoor unit		See total capacity of subsequent indoor units			
			~ P140	P141~P200	P201~P300	P301~
		Liquid pipe	ø9.52 brazed	ø9.52 brazed	ø9.52 brazed	ø15.88 brazed
		Gas pipe	ø15.88 brazed	ø19.05 brazed	ø22.2 brazed	ø28.58 brazed

Model code

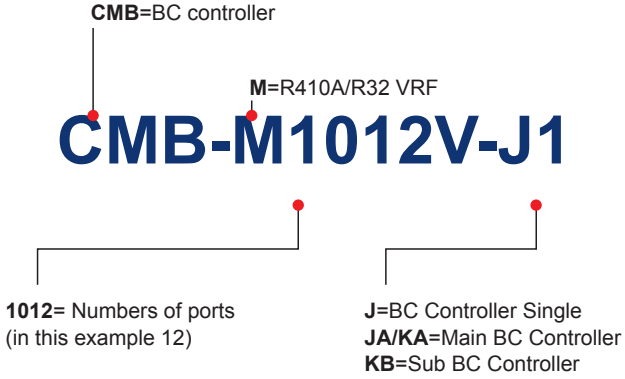
CITY MULTI outdoor units



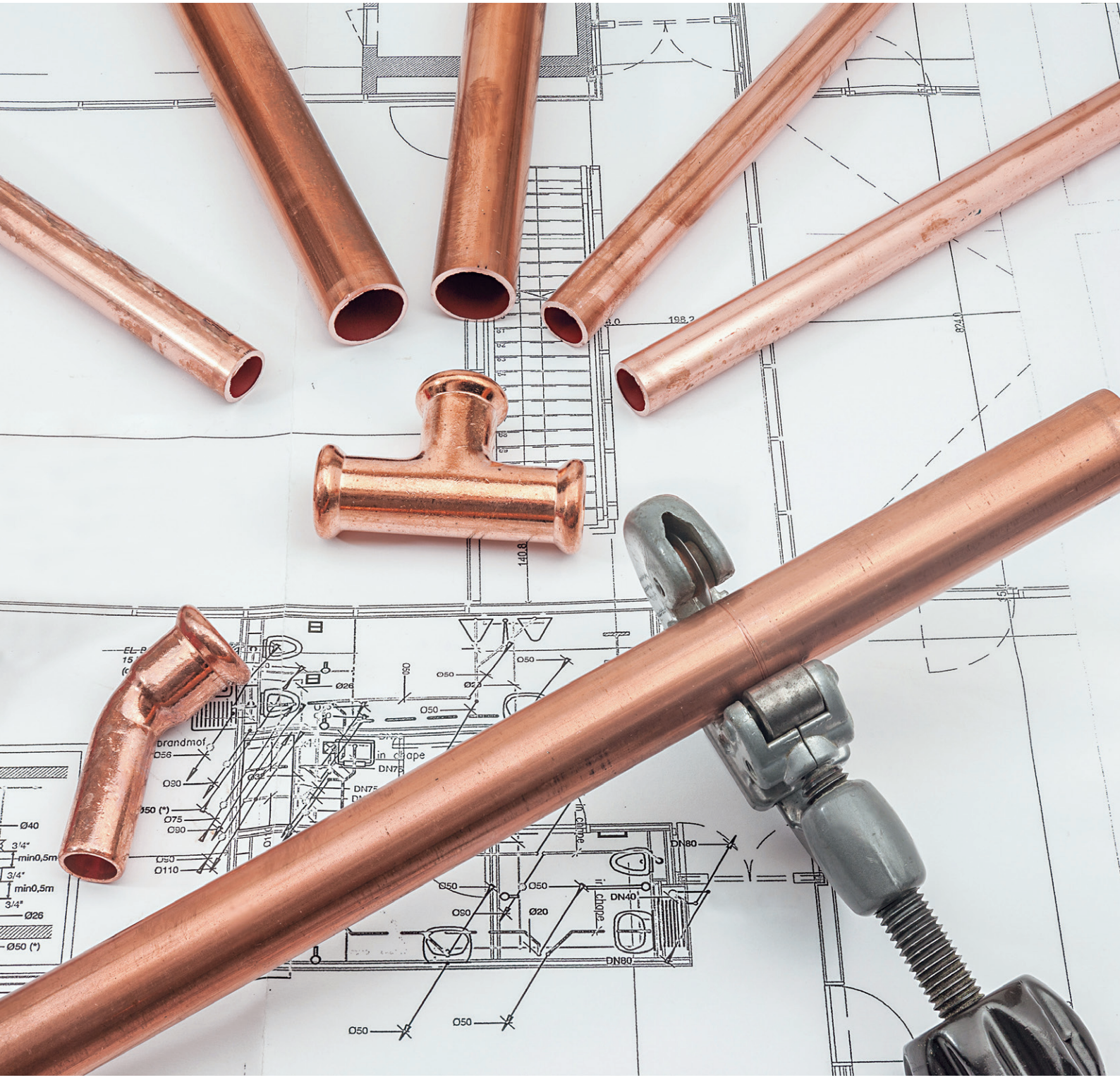
CITY MULTI indoor units



BC Controller



Refrigerant piping lenght



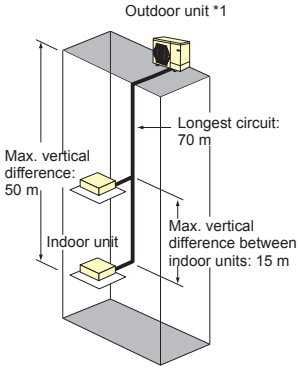
PUMY-SP112~140 Y(V)KM

SMALL Y COMPACT LINE

GEOMETRIC LIMITS OF REFRIGERATION PIPELINES	
Total effective length	120 m max.
Effective length of a single circuit	70 m max.
Effective length after first branch	50 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	30 m max.
Indoor/Indoor	15 m max.

Indicative values only – See technical handbook for installation details.
*1 Use optional deflectors if the outdoor unit is installed in a location subject to high winds.



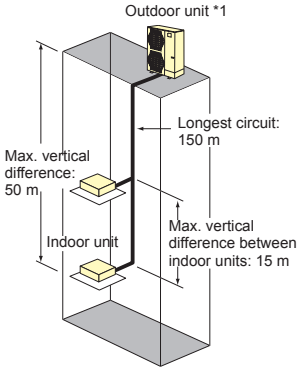
PUMY-P112~140 Y(V)KM4(5)

SMALL Y LINE

GEOMETRIC LIMITS OF REFRIGERATION PIPELINES	
Total effective length	300 m max.
Effective length of a single circuit	150 m max.
Effective length after first branch	30 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/Indoor	15 m max.

Indicative values only – See technical handbook for installation details.
*1 Use optional deflectors if the outdoor unit is installed in a location subject to high winds.



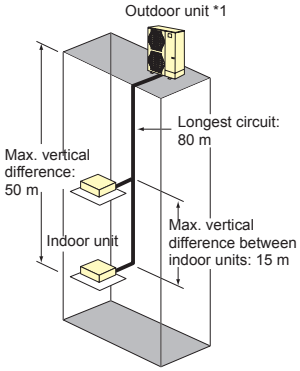
PUMY-P200 YKM2

SMALL Y (HIGH CAPACITY) LINE

GEOMETRIC LIMITS OF REFRIGERATION PIPELINES	
Total effective length	150 m max.
Effective length of a single circuit	80 m max.
Effective length after first branch	30 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/Indoor	15 m max.

Indicative values only – See technical handbook for installation details.
*1 Use optional deflectors if the outdoor unit is installed in a location subject to high winds.



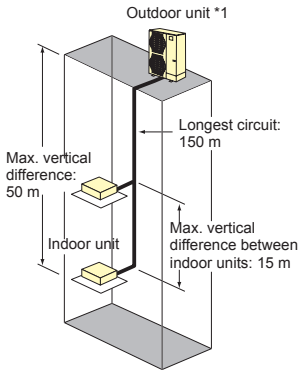
PUMY-P250/300 YBM

SMALL Y (HIGH CAPACITY) LINE

GEOMETRIC LIMITS OF REFRIGERATION PIPELINES	
Total effective length	310 m max.
Effective length of a single circuit	150 m max.
Effective length after first branch	30 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/Indoor	15 m max.

Indicative values only – See technical handbook for installation details.
*1 Use optional deflectors if the outdoor unit is installed in a location subject to high winds.



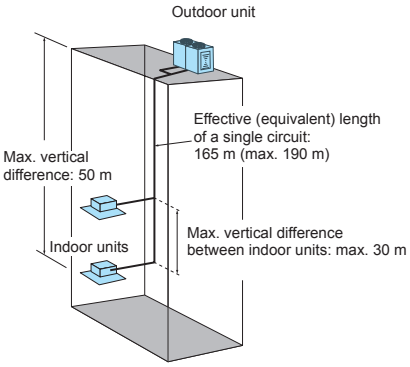
PUHY-P200-1500Y(S)KA

Y ECOSTANDARD LINE

GEOMETRIC PIPING LIMITATIONS WITH ONE OR MORE BC CONTROLLERS	
Total effective length	1000 m max.
Effective length of a single circuit	165 m max.
Equivalent length of a single circuit	190 m max.
Effective length after first branch	90 m max.
Effective length between outdoor unit	10 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/Indoor	30 m max.

Indicative values only – See technical handbook for installation details.



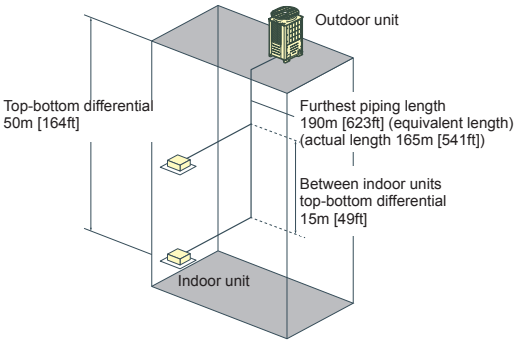
PUHY-P200-1350Y(S)NW-A1
PUHY-EP200-1350Y(S)NW-A1

Y NEXT STAGE LINE
Y NEXT STAGE HIGH EFFICIENCY LINE

GEOMETRIC PIPING LIMITATIONS WITH ONE OR MORE BC CONTROLLERS	
Total effective length	1000 m max.
Effective length of a single circuit	165 m max.
Equivalent length of a single circuit	190 m max.
Effective length after first branch	90 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/Indoor	30 m max.

Indicative values only – See technical handbook for installation details.



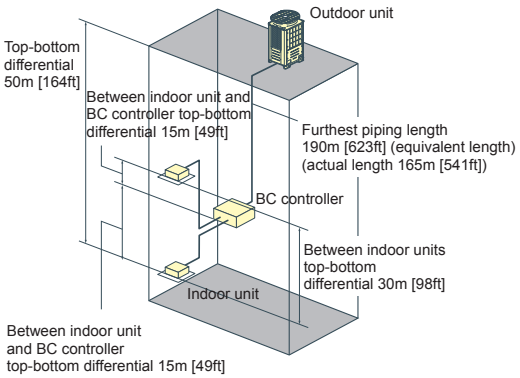
PURY-P200-1100Y(S)NW-A1
PURY-EP200-1100Y(S)NW-A1

R2 NEXT STAGE LINE
R2 NEXT STAGE HIGH EFFICIENCY LINE

GEOMETRIC PIPING LIMITATIONS WITH ONE OR MORE BC CONTROLLERS	
Total effective length	500-1000 m max.
Effective length of a single circuit	165 m max.
Equivalent length of a single circuit	190 m max.
Effective length between outdoor unit and BC controller	110 m max.
Effective length between BC controller and indoor unit	60 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/BC Controller	15 m max.
Indoor/Indoor	30 m max.
Effective length between outdoor unit and BC controller	15 m max.

Indicative values only – See technical handbook for installation details.



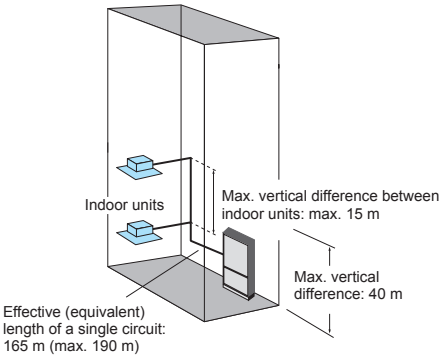
PQHY-P200-900Y(S)LM-A1

WY LINE

GEOMETRIC LIMITS OF REFRIGERATION PIPELINES	
Total effective length	300-500 m max.
Effective length of a single circuit	165 m max.
Equivalent length of a single circuit	190 m max.
Effective length after first branch	40 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/Indoor	15 m max.

Indicative values only – See technical handbook for installation details.
*500 m max per PQHY-P350-600YLM



PQRY-P200~900Y(S)LM-A1

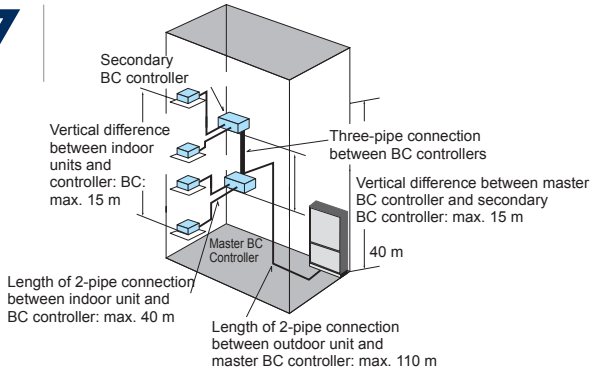
WR2 LINE

GEOMETRIC PIPING LIMITATIONS WITH ONE OR MORE BC CONTROLLERS	
Total effective length	300-750 m max.
Effective length of a single circuit	165 m max.
Equivalent length of a single circuit	190 m max.
Effective length between outdoor unit and BC controller	110 m max.
Effective length between BC controller and indoor unit	40-60 m max.

VERTICAL DIFFERENCE BETWEEN UNITS	
Indoor/outdoor (outdoor unit in higher position)	50 m max.
Indoor/outdoor (indoor unit in higher position)	40 m max.
Indoor/BC Controller	15 m max.
Indoor/Indoor	30 m max.
BC Controller and SUB BC Controller	15 m max.

Indicative values only – See technical handbook for installation details.

WR2 LINE



VRF Systems

Indoor units

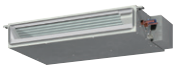
Ceiling cassette

Ceiling concealed

Ceiling suspended

Wall mounted

Floor standing

Type		Model		P10	P15	P20	P25	P32
				1.2 kW*1	1.7 kW*1	2.2 kW*1	2.8 kW*1	3.6 kW*1
Ceiling cassette	4 way flow	PLFY-P VFM-E1			•	•	•	•
		PLFY-M VEM-E				•	•	•
	2 way cassette	PLFY-P VLMD-E				•	•	•
	1 way cassette	PMFY-P VBM-E				•	•	•
Ceiling concealed indoor units	Middle-high static pressure	PEFY-P VMS1-E			•	•	•	•
	Middle-high static pressure	PEFY-M VMA-A				•	•	•
	High static pressure	PEFY-P VMHS-E						
	High static pressure	PEFY-P VMHS-E						
Ceiling Suspended Indoor units		PCFY-P VKM-E						
Wall mounted indoor units		PKFY-P VLM		•	•	•	•	•
		PKFY-P VKM						
	Wall mounted design with LEV-KIT	LEV KIT MSZ-EF			•	•	•	•
		LEV KIT MSZ-LN					•	•
Floor standing indoor units		PFFY-P VKM-E				•	•	•
		PFFY-P VLEM-E				•	•	•
	Concealed type	PFFY-P VCM-E				•	•	•

*Nominal cooling capacity

	P40	P50	P63	P71	P80	P100	P125	P140	P200	P250
	4.5 kW*1	5.6 kW*1	7.1 kW*1	8.0 kW*1	9.0 kW*1	11.2 kW*1	14.0 kW*1	16.0 kW*1	22.4 kW*1	28.0 kW*1
	•	•								
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Key Technologies

Mitsubishi Electric innovation allowed the development of functions and technologies at the service of comfort and energy efficiency.

Style

"Pure white" colour

This is the colour adopted by Mitsubishi Electric for many of its indoor units. It is a colour suitable for virtually all interior spaces.

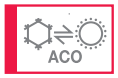
Automatic vane

The vane adjusts automatically to the optimum angle in relation to operating mode and output air temperature.

Functions

Timer

Annual, weekly, daily or simplified timer functions may be used to switch the unit on and off as desired.



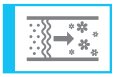
Automatic mode switching

The indoor unit automatically (AUTO) switches operating mode (COOL/HEAT) in relation to the temperature setting.

Ultra silent

These indoor units produce extraordinarily low sound pressure levels.

Air quality

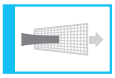


Deodorizing filter

The bad smells present in the environment are captured from the deodorizing filter and then be eliminated by the technology plasma. Extremely low deodorization time makes this function even more effective against the odors of animals or of cooking.

Outdoor air intake

The air quality in the indoor space may be improved using the outdoor fresh air intake.



Standard filter

A honeycomb or synthetic fibre filter with high dust holding capacity.

Long-life filter

The special surface of the long-life filter requires less maintenance than a conventional filter.

"Dirty filters" indicator signal

Filter usage is monitored to indicate when maintenance is necessary.

Air purifyng filter

The filter has a large capture area and deodourise the circulating air.

Air distribution

Vane positions

Number of possible positions for the air deflector vane.

Swing vane

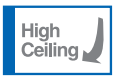
A continuous swinging motion of the vane ensures that air is distributed ideally throughout the room.

Fan speed

Number of fan speeds available.

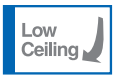
Automatic fan

La velocità del ventilatore viene regolata in automatico per soddisfare il grado di comfort richiesto.



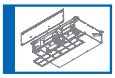
High ceiling

For installations on high ceilings, the air flow may be augmented to improve air distribution.



Low ceiling

For installations on low ceilings, the air flow may be reduced to prevent unpleasant draughts.



Air intake on underside

As an option during installation, the unit may be configured with the air intake on the underside.

Installation and maintenance

Condensate drain pump

The condensate drain pump facilitates installation.

Self-diagnostic

A self-diagnostic system makes troubleshooting and correcting malfunctions easier by recording a log of faults.

Special functions

Auto-restart

The auto restart function may be used to configure the indoor units to restart automatically after a power outage, minimising interruptions in the operation of the system to maintain thermal comfort levels in the air conditioned spaces. This function must be enabled as an option as it is not enabled by default. A choice of two automatic start configurations is available:

- restart only the indoor units which were on before the power outage;
- restart all indoor units, irrespective of on/off state before the power outage.

Stratification compensation

The automatic heat stratification compensation function in HEAT mode is implemented by adjusting the ambient temperature read by a probe on the indoor unit, to obtain a value that more closely reflects the true temperature of the air conditioned space.
An offset of -4°C is applied, so that, for instance, if the inlet temperature measured is 24°C, the system automatically displays an adjusted value of 20°C, which should more closely reflect the true ambient temperature. The Mitsubishi Electric CITY MULTI VRF system bases the thermal power actually delivered on this value.
The stratification compensation function is available on all Mitsubishi Electric indoor unit types with the exception of floor-standing units and certain specific cases (such as with units with underside air intakes), and may be disabled on request.

Low temperature cooling

This function extends the operating temperature range in cooling mode to offer a lowest settable temperature of 14°C. Where the ability to cool to temperatures lower than the standard lowest comfort value of 19°C (typically for sports centres, laboratories etc.) is necessary, the settable temperature range in cooling mode may be extended to offer a lowest temperature of 14°C.
Contact your local distributor for more details on the types of compatible Indoor units.
The indoor unit fan is run at a higher speed in this configuration (except with the SMALL Y model outdoor unit of the PUMY series).

		Cassette							
									
		PLFY-P VFM-E1	PLFY-M VEM-E	PLFY-P VLMD-E	PMFY-P VBM-E	PEFY-P VMS1-E	PEFY-M VMA-A	PEFY-P VMHS-E	
Style	Pure White	•	•	•	•				
	AUTO VANE	•	•	•	•				
Functions		•	•		•	•	•	•	
	ACO	•	•	•	•	•	•	•	
	Ultra Silent	•	•	•		•			
Air quality	Fresh-air Intake	•	•	•					
			•		•				
	Long life	•	•	•					
	Catechin								
	Check!	•	•	•	•				
	Air Purifying								
Air distribution		5	5	4	4				
	SWING	•	•	•	•				
		3	4	3 4(P125)	4	3	3	2	
	AUTO	•	•			•			
	High Ceiling	•	•						
	Low Ceiling	•	•						
							•		
Install. and mainten.	Drain Lift Up	•	•	•	•	•*	•	•*	
	Self Diagnosis	•	•	•	•	•	•	•	
Special functions	Auto Restart	•	•	•	•	•	•	•	
	Offset -4°	•	•		•	•	•	•	
	Low Temp Cooling			•		•	•	•	

* Optional

							Floor standing	
								
	PEFY-P VMHS-E	PCFY-P VKM-E	PKFY-P VKM-E	PKFY-P VLM	LEV KIT MSZ-EF	LEV KIT MSZ-LN	PFFY-P VLEM-E	PFFY-P VCM-E
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PLFY-P VFM-E1

INDOOR UNITS - 4-way cassette 600x600

CITY MULTI

Ideal for...

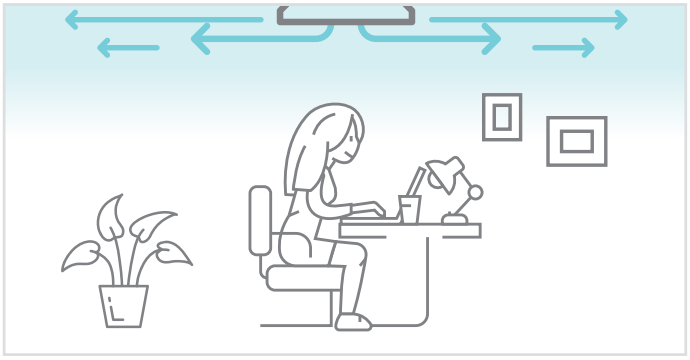
The **straight-line shape** introduced has resulted in a stylish and modern square design. Its high affinity ensures the ability to blend in seamlessly with any interior. The indoor unit is an ideal match for office or store use.

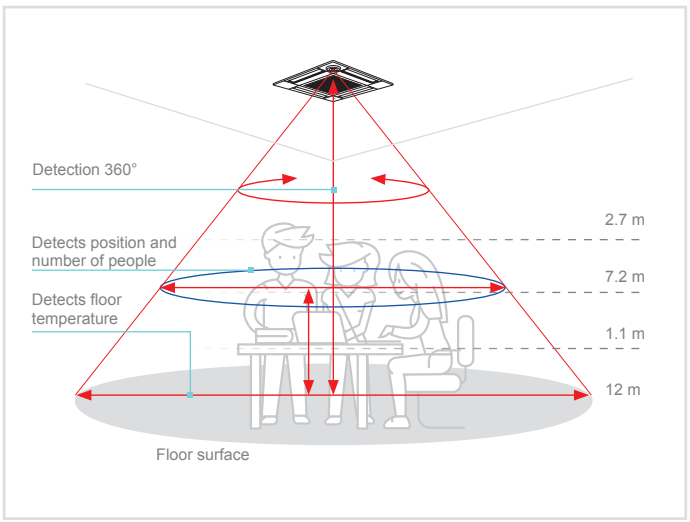
3D i-see Sensor

New advanced 3D i-see sensor detects people's position and number. Once a person is detected, the angle of the vane is automatically adjusted. Each vane can be indenpendently set to "Direct Airflow" or "Indirect Airflow" according to taste.
The 3D i-see Sensor detects the number of people in the room and adjusts the power accordingly. This makes automatic power-saving operation possible in places where the number of people changes frequently.
Additionally, when the area is continuously unoccupied, the system switches to a more enhanced power-saving mode. Depending on the setting, it can also stop the operation.

Horizontal flow

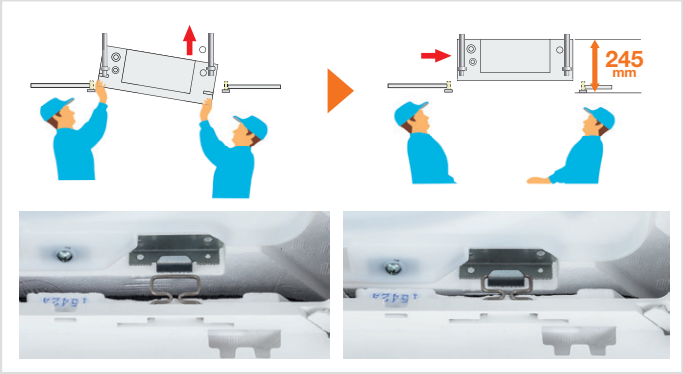
The new airflow control completely eliminates that uncomfortable drafty-feeling with the introduction of a **horizontal airflow** that spreads across the ceiling, maximizing the Coanda effect. Furthermore, 5 patterns for vane position (on previous VCM was 4) and individual settable vane and ways ensure higher comfort. The ideal airflow for offices and restaurants.





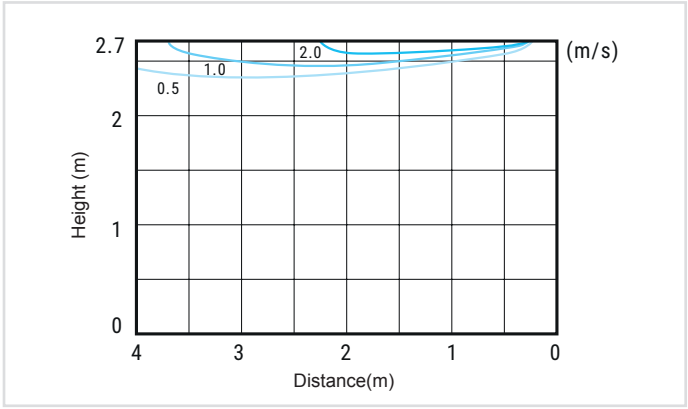
Simplified installation

The height above ceiling of 245 mm is top class in the industry.
The height above ceiling of 245 mm enables fitting into narrow ceiling space. Installation is simple, even when the ceiling spaces are narrow to make the ceilings higher. Light weight (max 15kg) and temporary hanging hooks for grille allow to make installation easier and quicker.



Panel and control

The unit is supplied with SLP-2FAL panel which includes signal receiver. Is available as optional the SLP-2FALM panel combined with the new PAR-SL101A-E wireless remote control with weekly timer, backlight, temperature setting in 0.5 °C steps and individual control of the 4 deflectors.



Key Technologies

DC Inverter · Pure White · AUTO VANE · ACO · Ultra Silent · Fresh-air Intake · Long life · Check! · SWING · Drain Lift Up · Self Diagnosis · Auto Restart · Offset -4°

Technical specifications

MODEL			PLFY-P15VFM-E1	PLFY-P20VFM-E1	PLFY-P25VFM-E1	PLFY-P32VFM-E1	PLFY-P40VFM-E1	PLFY-P50VFM-E1
Default panel			SLP-2FAL					
Power			Single phase, 220-240V 50Hz					
Capacity in cooling mode*1		kW	1.7	2.2	2.8	3.6	4.5	5.6
		Btu/h	5800	7500	9600	12300	15400	19100
Capacity in heating mode*1		kW	1.9	2.5	3.2	4	5	6.3
		Btu/h	6500	8500	10900	13600	17100	21500
Power consumption	Cooling	kW	0.02	0.02	0.02	0.02	0.03	0.04
	Heating	kW	0.02	0.02	0.02	0.02	0.03	0.04
Current	Cooling	A	0.19	0.21	0.22	0.23	0.28	0.4
	Heating	A	0.14	0.16	0.17	0.18	0.23	0.35
External finish	Unit		Galvanised steel sheet with uncoated thermal insulation					
	Grille		Pure White					
Dimensions AxLxP	Unit	mm	245x570x570	245x570x570	245x570x570	245x570x570	245x570x570	245x570x570
	Grille	mm	10x625x625	10x625x625	10x625x625	10x625x625	10x625x625	10x625x625
Net weight	Unit	kg	14	14	14	15	15	15
	Grille	kg	3	3	3	3	3	3
Heat exchanger			Cross fins					
Fan	Type x Quantity		3D Turbo fan x 1					
	Air flow*2	m^3/min	6.5 - 7.5 - 8	6.5 - 7.5 - 8.5	6.5 - 8 - 9	7 - 8 - 9.5	7.5 - 9 - 11	9 - 11 - 13
	Ext. Static pressure	Pa	0	0	0	0	0	0
Air filter			Polypropylen honeycomb (long life)					
Refrigerant pipe diameter	Gas (swaged)	mm	12.7	12.7	12.7	12.7	12.7	12.7
	Liquid (swaged)	mm	6.35	6.35	6.35	6.35	6.35	6.35
Sound pressure*2*3		dB(A)	26 - 28 - 30	26 - 29 - 31	26 - 30 - 33	26 - 30 - 34	28 - 33 - 39	33 - 39 - 43

* Default panel. SLP-2FAL panel is equipped by Signal reicever
*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium-high modes.
*3 Measured in anechoic chamber with 230V mains power.

Optional parts	DESCRIPTION
PAC-SF1ME-E	Corner 3D I-see Sensor for PLFY-P VFM-E1

PLFY-M VEM-E

INDOOR UNITS - 4-way cassette 900x900

CITY MULTI

Ideal for...

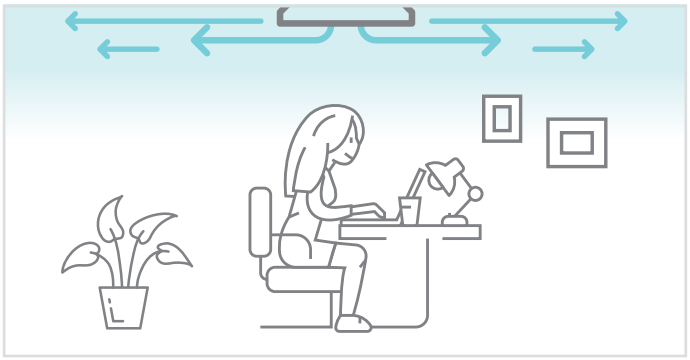
New design of 4-way cassette VEM model suits most commercial applications thanks to its elegance and syle. Its peculiar features are horizontal flow function, individually settable vanes and possibility to install 3D i-see sensor for top environment comfort control.

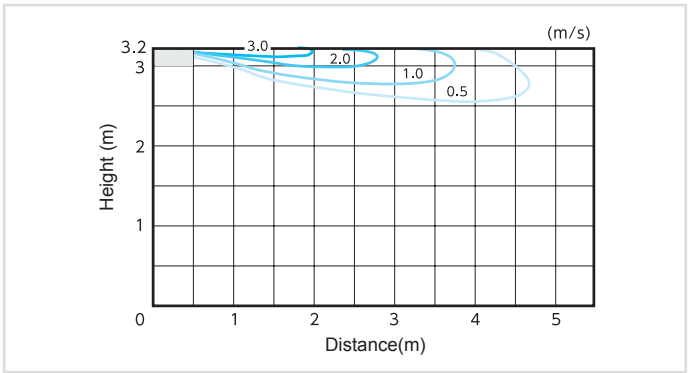
3D i-see sensor: Temperature sensor

3D i-see sensor is able to detect temperature distribution inside the room, making it possible to direct airflow to those areas which generally receive less air, making them more uncomfortable (too cold or too hot) for users.

Horizontal flow

This new indoor unit is capable of handling five vane positions, making it possible to achieve horizontal flow that spreads across the ceiling, maximizing the Coanda effect. This allows to avoid, if needed, direct airflow to users in the room, which can sometimes be uncomfortable.

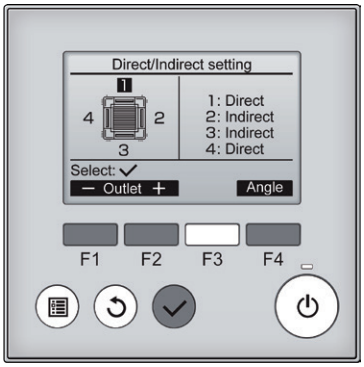




Key Technologies

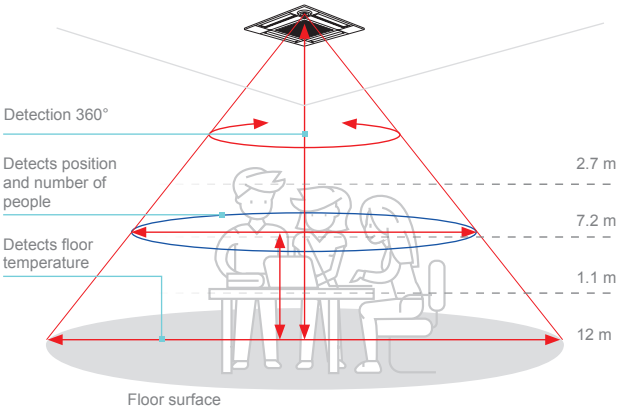
3D i-see sensor: Direct/Indirect flow function

Optional 3D i-see sensor allows to detect and count users in the environment and their position. User can set either Direct or Indirect flow to occupied areas, with single control on four vanes.



3D i-see sensor: Energy saving

3D i-see sensor features allow to optimize comfort conditions and at the same time achieve energy saving. Thanks to the occupancy sensor the unit is able to automatically handle and reduce power output accordingly to users actually being present in the room or in certain areas of it. This feature is particularly helpful in those environments in which occupancy varies significantly during the day.



Panel and control

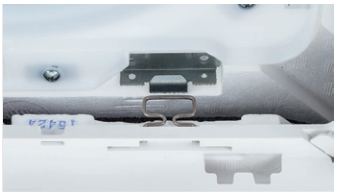
The unit is supplied with PLP-6EA panel which does not include signal receiver. This component (PAR-SE9FA-E) can be installed as a corner accessory, as well as 3D i-See Sensor (PAC-SE1ME-E). The unit is compatible with all wired MA and ME remote controls and, if equipped with signal receiver, wireless remote controls. New PAR-SL101A-E is compatible with PLFY-M VEM, and presents numerous new features, such as weekly timer, backlit display, 0,5°C temperature setting and monitoring, as well as functions for 3D i-see sensor (optional).

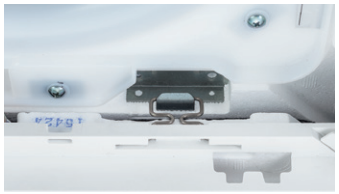
Wireless signal receivee
(PAR-SE9FA-E)

3D i-see sensor
(PAC-SE1ME-E)

Simplified installation

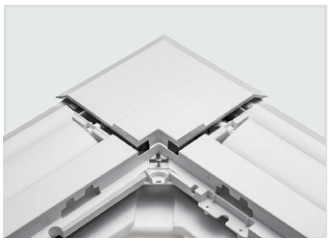
Thanks to new temporary panel supports maintenance and installation operation are now easier for field technicians.





Also, panel weight has been reduced by 20% thanks to a new design.

A simple loosening of support screws allows the removal of the control box and corner accessories.



Technical specifications

MODEL			PLFY-M20VEM-E	PLFY-M25VEM-E	PLFY-M32VEM-E	PLFY-M40VEM-E	PLFY-M50VEM-E
Power			A single phase, 220-240V 50Hz / a single phase, 200V 60Hz				
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5	5.6
		Btu/h	7500	9600	12300	15400	19100
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3
		Btu/h	8500	10900	13600	17100	21500
Power consumption	Cooling	kW	0.03	0.03	0.03	0.03	0.03
	Heating	kW	0.03	0.03	0.03	0.03	0.03
Current	Cooling	A	0.31	0.31	0.32	0.32	0.32
	Heating	A	0.24	0.24	0.25	0.25	0.25
External finish(Munsel No.)	Unit		Galvanized steel plate				
	Grille		Nr. Munsel (1.0Y/9.2/0.2) (Bianco)				
Dimensions (HxLxW)	Unit	mm	258x840x840	258x840x840	258x840x840	258x840x840	258x840x840
	Grille	mm	40x950x950	40x950x950	40x950x950	40x950x950	40x950x950
Net weight	Unit	kg	19	19	19	19	19
	Grille	kg	5	5	5	5	5
Heat exchanger			Cross fin (Al/Cu)				
Fan	Type x Quantity		Turbo fan x 1				
	Air flow*2	m^3/min	12-13-14-15	12-13-14-15	13-14-15-16	13-14-15-17	13-14-16-18
		l/s	200-217-233-250	200-217-233-250	217-233-250-267	217-233-250-283	217-233-267-300
	Static ext.l pressure	Pa	0	0	0	0	0
Motor	Type		DC Motor				
	Power output	kW	0.050	0.050	0.050	0.050	0.050
Air filter			Polypropilene honeycomb fabric				
Refrigerant pipe diameter	Gas (swaged)	mm	Ø 12.7	Ø 12.7	Ø 12.7	Ø 12.7	Ø 12.7
	Liquid (swaged)	mm	Ø 6.35	Ø 6.35	Ø 6.35	Ø 6.35	Ø 6.35
Local drain pipe diameter	Grille		O.D.32	O.D.32	O.D.32	O.D.32	O.D.32
Sound pressure*2*3		dB(A)	24-26-27-29	24-26-27-29	26-27-29-31	26-27-29-31	26-27-29-31

Technical specifications

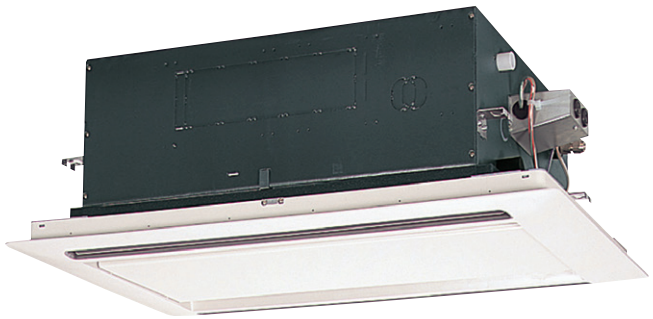
MODEL			PLFY-M63VEM-E	PLFY-M80VEM-E	PLFY-M100VEM-E	PLFY-M125VEM-E
Power			A single phase, 220-240V 50Hz / a single phase, 200V 60Hz			
Capacity in cooling mode*1		kW	7.1	9.0	11.2	14.0
		Btu/h	24200	30700	38200	47800
Capacity in heating mode*1		kW	8.0	10.0	12.5	16.0
		Btu/h	27300	34100	42700	54600
Power consumption	Cooling	kW	0.03	0.05	0.07	0.11
	Heating	kW	0.03	0.05	0.07	0.11
Current	Cooling	A	0.36	0.50	0.67	1.06
	Heating	A	0.29	0.43	0.60	0.99
External finish(Munsel No.)	Unit		Galvanized steel plate			
	Grille		Nr. Munsel (1.0Y/9.2/0.2) (Bianco)			
Dimensions (HxLxW)	Unit	mm	258x840x840	258x840x840	298x840x840	298x840x840
	Grille	mm	40x950x950	40x950x950	40x950x950	40x950x950
Net weight	Unit	kg	21	21	24	24
	Grille	kg	5	5	5	5
Heat exchanger			Cross fin (Al/Cu)			
Fan	Type x Quantity		Turbo fan x 1			
	Air flow*2	m^3/min	14-15-16-18	14-17-20-23	20-23-26-29	22-26-30-35
		l/s	233-250-267-300	233-283-333-383	333-383433-483	367-433-500-583
	Static ext.l pressure	Pa	0	0	0	0
Motor	Type		DC Motor			
	Power output	kW	0.050	0.050	0.120	0.120
Air filter			Polypropilene honeycomb fabric			
Refrigerant pipe diameter	Gas (swaged)	mm	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88
	Liquid (swaged)	mm	Ø 9.52	Ø 9.52	Ø 9.52	Ø 9.52
Local drain pipe diameter	Grille		O.D.32	O.D.32	O.D.32	O.D.32
Sound pressure*2*3		dB(A)	28-29-30-32	28-31-34-37	34-37-39-41	35-39-42-45

*1 Cooling/Heating capacity is the maximum value measured in the following conditions.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) BS. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 High-mid1-mid2-low setting
*3 Measured in anechoic chamber with 230V power supply.

Optional parts	DESCRIPTION
PAC-SE1ME-E	Corner 3D I-see Sensor for PLFY-M VEM-E
PLP-6EALM	Panel with wireless remote controller

PLFY-P VLMD-E

INDOOR UNITS - 2-way cassette



Ideal for...

The slimline housing is ideal for installation in small ceiling spaces and for replacing obsolete equipment in old buildings. In fact, the unit is just 290 mm high.

General characteristics

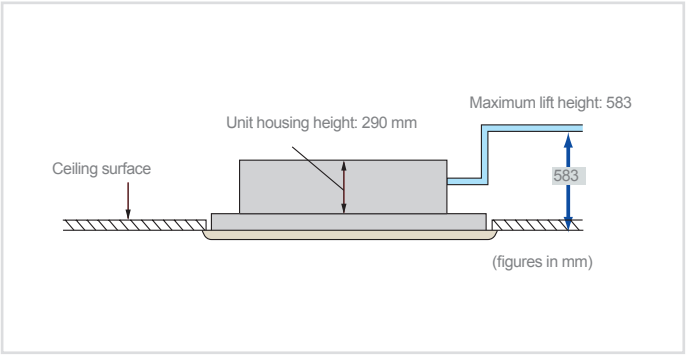
Terminal block
The terminal block is positioned on the outside of the main unit for easier wiring.
Direct external air intake
Clean air can enter the main unit directly (optional accessories required).
Long-life filter supplied as standard
The long-life antibacterial filter requires no maintenance for approximately one year.
Compact unit and low noise levels
15Pa noise levels (standard static pressure).

Noise level dB(A)

Capacity		P20	P25	P32	P40	P50	P63	P80	P100	P125
Fan speed	High	33			36	37	39	39	42	46
	Medium	30			33	34	37	36	39	42/44
	Low	27			29	31	32	33	36	40

Condensate lift pump

The standard version is equipped with a mechanism with condensate lift pump. The drain can be positioned anywhere up to 583mm from the ceiling surface, allowing greater freedom of movement due to long transverse pipes and greater pipe layout versatility.



Easy installation

Installation and maintenance are made easier by the use of a lighter panel and the positioning of the switchboard close to the panel. In addition, the heat exchanger can be flushed by moving the central panel, filter and fan within the pipe layouts themselves.

Key Technologies

Technical specifications

MODEL			PLFY-P20VLMD-E	PLFY-P25VLMD-E	PLFY-P32VLMD-E	PLFY-P40VLMD-E
Power			Single phase, 220-240V 50Hz			
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5
		Btu/h	7500	9600	12300	15400
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0
		Btu/h	8500	10900	13600	17100
Power consumption	Cooling	kW	0.072	0.072	0.072	0.081
	Heating	kW	0.065	0.065	0.065	0.074
Current	Cooling	A	0.36	0.36	0.36	0.40
	Heating	A	0.30	0.30	0.30	0.34
External finish	Unit		Galvanized steel plate			
	Grille		Nr. Munsel 6.4Y 8.9/0.4 (white)			
Dimensions AxLxP	Unit	mm	290x776x634	290x776x634	290x776x634	290x776x634
	Grille	mm	20x1080x710	20x1080x710	20x1080x710	20x1080x710
Net weight	Unit	kg	23	23	24	24
	Grille	kg	6.5	6.5	6.5	6.5
Heat exchanger			Cross fin (Al/Cu)			
Fan	Type x Quantity		Turbo fan x 1			
	Air flow*2	m^3/min	6.5-8.0-9.5	6.5-8.0-9.5	6.5-8.0-9.5	7.0-8.5-10.5
		l/s	108-133-158	108-133-158	108-133-158	117-142-175
		cfm	230-283-335	230-283-335	230-283-335	247-300-371
	Ext. Static pressure	Pa	0	0	0	0
Motor	Type		1-phase induction motor			
	Ext. Static pressure	kW	0.015 (a 240V)	0.015 (a 240V)	0.015 (a 240V)	0.015 (a 240V)
Air filter			Polypropylen honeycomb (long life)			
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7
	Liquid (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35
Local drain pipe diameter		mm	O.D. 32	O.D. 32	O.D. 32	O.D. 32
Sound pressure*2*3		dB(A)	28-31-34	28-31-34	28-31-34	30-34-37

*1 The heating/cooling capacity indicates the maximum values during operation under the following conditions.
Cooling: indoor 27°C (81 °F) DB/19°C(66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45'F) DB/6°C (43°F) WB.
*2 Airflow rate/noise levels are expressed as (low-middle1-middle2-high).
*3 Measured in an anechoic chamber.

Technical specifications

MODEL			PLFY-P50VLMD-E	PLFY-P63VLMD-E	PLFY-P80VLMD-E	PLFY-P100VLMD-E	PLFY-P125VLMD-E
Power			Single phase, 220-240V 50Hz				
Capacity in cooling mode*1		kW	5,6	7,1	9,0	11,2	14,0
		Btu/h	19100	24200	30700	38200	47800
Capacity in heating mode*1		kW	6,3	8,0	10,0	12,5	16,0
		Btu/h	21500	27300	34100	42700	54600
Power consumption	Cooling	kW	0,082	0,101	0,147	0,157	0,28
	Heating	kW	0,075	0,094	0,140	0,150	0,27
Current	Cooling	A	0,41	0,49	0,72	0,75	1,35
	Heating	A	0,35	0,43	0,66	0,69	1,33
External finish	Unit		Galvanized steel plate				
	Grille		Nr. Munsel 6.4Y 8.9/0.4 (white)				
Dimensions AxLxP	Unit	mm	290x946x634	290x946x634	290x1446x634	290x1446x634	290x1708x606
	Grille	mm	20x1250x710	20x1250x710	20x1750x710	20x1750x710	20x2010x710
Net weight	Unit	kg	23	28	44	47	56
	Grille	kg	7.5	7.5	12.5	12.5	13.0
Heat exchanger			Cross fin				
Fan	Type x Quantity		Turbo fan x 1	Turbo fan x 1	Turbo fan x 2	Turbo fan x 2	Sirocco x 4
	Air flow*2	m^3/min	6,5-8,0-9,5	11,0-13,0-15,5	15,5-18,5-22,0	17,5-21,0-25,0	24,0-27,0-30,0-33,0
		l/s	108-133-158	167-217-258	258-308-367	292-350-417	400-450-500-550
		cfm	230-283-335	353-459-547	547-653-777	618-742-883	848-953-1059-1165
	Ext. Static pressure	Pa	0	0	0	0	0
Motor	Type		1-phase induction motor				
	Ext. Static pressure	kW	0,020 (a 240V)	0,020 (a 240V)	0,020 (a 240V)	0,030 (a 240V)	0,078x2 (a 240V)
Air filter			Polypropylen honeycomb (long life)				Synthetic fiber unwoven cloth filter (long life)
Refrigerant pipe diameter	Gas (swaged)	mm	ø12,7	ø15,88	ø15,88	ø15,88	ø15,88
	Liquid (swaged)	mm	ø6,35	ø9,52	ø9,52	ø9,52	ø9,52
Local drain pipe diameter		mm	O.D.32	O.D.32	O.D.32	O.D.32	O.D.32
Sound pressure*2*3		dB(A)	32-35-38	33-38-40	34-37-40	37-41-43	40-42-44-46

*1 The heating/cooling capacity indicates the maximum values during operation under the following conditions.
Cooling: indoor 27°C (81°F) DB/19°C(66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68° F) DB, outdoor 7°C (45° F) DB/6°C (43°F) WB.
*2 Airflow rate/noise levels are expressed as (low-middle1-middle2-high).
*3 Measured in an anechoic chamber.

PMFY-P VBM-E

INDOOR UNITS - 1-way cassette

Ideal for...

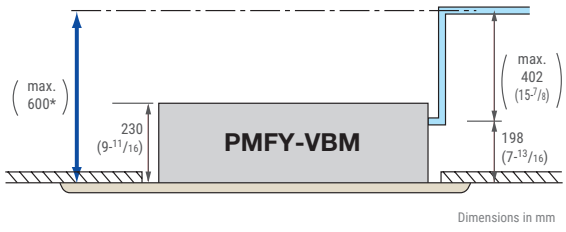
Compact and light housing, perfect for applications in premises with a limited ceiling space.

Easy installation and maintenance

The dimensions of the unit housing have been standardised for all models at 854 mm to facilitate installation. The weight of the body is only 14 kg for the main unit and 3 kg for the panel, making this unit one of the lightest on the market.

Condensate lift pump

The condensate drain can be positioned anywhere up to 600 mm from the ceiling surface.

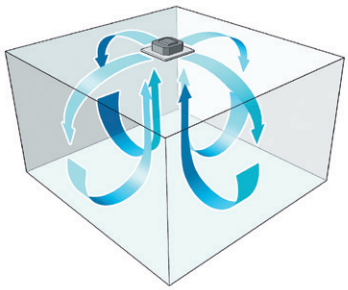


Silent operation

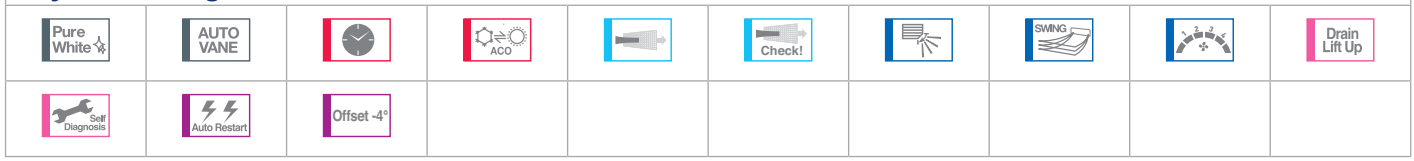
New airflow control technology reduces noise levels to just 27dB (P20VBM) for industry-leading quiet performance.

Improved Coanda effect

Thanks to this effect, the air tends to follow a trajectory that allows it to circulate more evenly in the air-conditioned environment.



Key Technologies



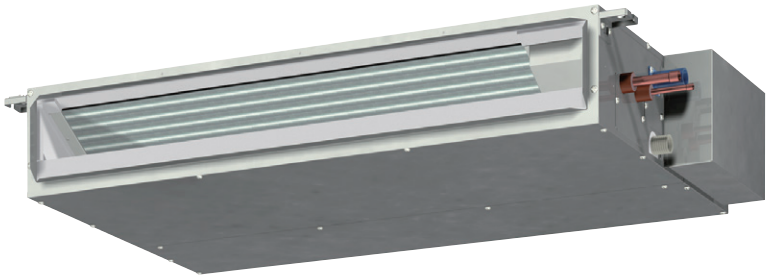
Technical specifications

MODEL			PMFY-P20VBM-E	PMFY-P25VBM-E	PMFY-P32VBM-E	PMFY-P40VBM-E
Power			Single phase, 220-240V 50Hz			
Capacity in cooling mode*1		kW	2,2	2,8	3,6	4,5
		Btu/h	7500	9600	12300	15400
Capacity in heating mode*1		kW	2,5	3,2	4,0	5,0
		Btu/h	8500	10900	13600	17100
Power consumption	Cooling	kW	0,042	0,044	0,044	0,054
	Heating	kW	0,042	0,044	0,044	0,054
Current	Cooling	A	0,20	0,21	0,21	0,26
	Heating	A	0,20	0,21	0,21	0,26
External finish	Unit		Galvanized steel plate			
	Grille		Nr. Munsel 0.98Y 8.99/0.63			
Dimensions AxLxP	Unit	mm	230x812x395	230x812x395	230x812x395	230x812x395
	Grille	mm	30x1000x470	30x1000x470	30x1000x470	30x1000x470
Net weight	Unit	kg	14	14	14	14
	Grille	kg	3	3	3	3
Heat exchanger			Cross fin			
Fan	Type x Quantity		Linear Flow fan x 1			
	Air flow*2	m^3/min	6,5-7,2-8,0-8,7	7,3-8,0-8,6-9,3	7,3-8,0-8,6-9,3	7,7-8,7-9,7-10,7
		l/s	108-120-133-145	122-133-143-155	122-133-143-155	128-145-162-178
		cfm	230-254-283-307	258-283-304-328	258-283-304-328	272-307-343-378
	Ext. Static pressure	Pa	0	0	0	0
Motor	Type		Single-phase induction motor			
	Ext. Static pressure	kW	0,028	0,028	0,028	0,028
Air filter			Polypropylen honeycomb (long life)			
Refrigerant pipe diameter	Gas (swaged)	mm	ø12,7	ø12,7	ø12,7	ø12,7
	Liquid (swaged)	mm	ø6,35	ø6,35	ø6,35	ø6,35
Local drain pipe diameter		mm	O.D. 26	O.D. 26	O.D. 26	O.D. 26
Sound pressure*2*3		dB(A)	27-30-33-35	32-34-36-37	32-34-36-37	33-35-37-39

*1 The heating/cooling capacity indicates the maximum values during operation under the following conditions.
Cooling: indoor 27°C (81 °F) DB/19°C(66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43° F) WB.
*2 Airflow rate/noise levels are expressed as (low-middle1-middle2-high).
*3 Measured in an anechoic chamber.

PEFY-P VMS1-E

INDOOR UNITS - Ceiling concealed medium to low static pressure



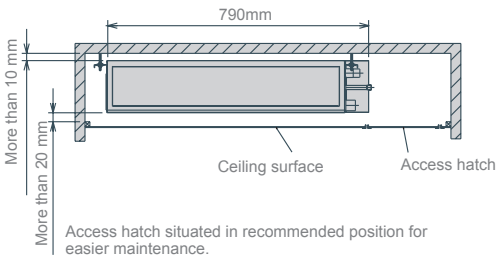
CITY MULTI

Ideal for...

This **ultra-slim 200 mm** unit offers extraordinary flexibility and is particularly suitable for use in rooms where low noise and compact vertical dimensions are essential.

Ultra-slim

These units are extremely thin, at just 200 mm in height.
Extremely compact width and lengths of:
7790 mm for P15 and P32 models
990 mm for P40 and P50 models
1190 mm for P63 models
May be installed easily in cramped spaces such as ceiling recesses or double ceilings.



Condensate lift pump

The VMS1 is equipped with a condensate lift pump as standard.

Adjustable static pressure

L'unità è adatta per diverse applicazioni, grazie alle sue 4 impostazioni di presWith 4 selectable static pressure settings (5, 15, 25 and 50Pa), this unit is ideal for a variety of different applications.

Adjustable air flow

Three different fan speed settings - "low", "medium" and "high" – ensure the desired levels of comfort.

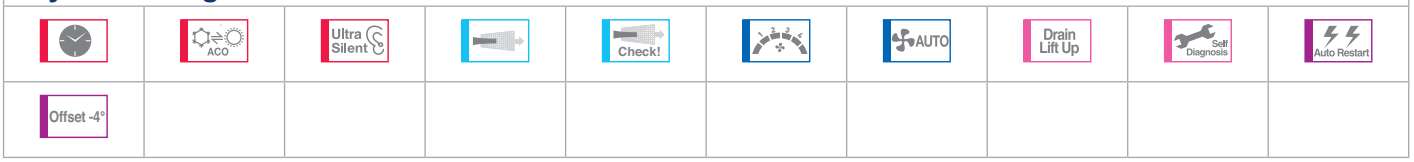
Low noise

The new design of the centrifugal fan and coil reduces noise levels.

Noise level dB(A)

Capacity		P15	P20	P25	P32	P40	P50	P63
Fan speed	High	28			32	33	35	36
	Medium	24			27	30	32	33
	Low	22			24	28	30	30

Key Technologies



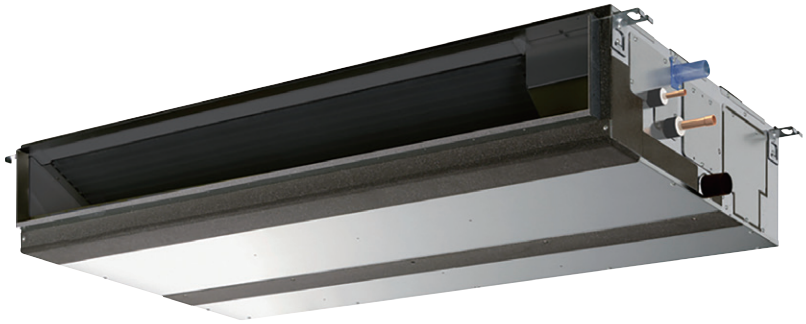
Technical specifications

MODEL			PEFY-P15VMS1-E	PEFY-P20VMS1-E	PEFY-P25VMS1-E	PEFY-P32VMS1-E	PEFY-P40VMS1-E	PEFY-P50VMS1-E	PEFY-P63VMS1-E
Power			A single-phase, 220-240V 50Hz / a 1 fase, 220-240V 60Hz						
Capacity in cooling mode*1		kW	1.7	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	5800	7500	9600	12300	15400	19100	24200
Capacity in heating mode*1		kW	1.9	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	6500	8500	10900	13600	17100	21500	27300
Power consumption	Cooling	kW	0.05 [0.03]	0.05 [0.03]	0.06 [0.04]	0.07 [0.05]	0.07 [0.05]	0.09 [0.07]	0.09 [0.07]
	Heating	kW	0.03 [0.03]	0.03 [0.03]	0.04 [0.04]	0.05 [0.05]	0.05 [0.05]	0.07 [0.07]	0.07 [0.07]
Current	Cooling	A	0.42 [0.31]	0.47 [0.36]	0.50 [0.39]	0.50 [0.39]	0.56 [0.45]	0.67 [0.56]	0.72 [0.61]
	Heating	A	0.31 [0.31]	0.36 [0.36]	0.39 [0.39]	0.39 [0.39]	0.45 [0.45]	0.56 [0.56]	0.61 [0.61]
External finish			Galvanised						
Dimensions HxLxW		mm	200x790x700	200x790x700	200x790x700	200x790x700	200x990x700	200x990x700	200x1190x700
Net weight		kg	19 [18]	19 [18]	19 [18]	20 [19]	24 [23]	24 [23]	28 [27]
Heat exchanger			Cross fins (sheet aluminium fins and copper piping)						
Fan	Type x Quantity		Sirocco x 2				Sirocco x 3		Sirocco x 4
	Air flow (low-medium-high)	m^3/min	5-6-7	5.5-6.5-8	5.5-7-9	6-8-10	8-9.5-11	9.5-11-13	12-14-16.5
	Static external press	Pa	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50
Motor	Type		Brushless DC motor						
	Power output	kW	0.096	0.096	0.096	0.096	0.096	0.096	0.096
Air filter			Polypropylene honeycomb fabric (washable)						
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø15.88 brazed
	Liquid (swaged)	mm	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø9.52 brazed
Local drain pipe diameter			O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32
Sound pressure (low-medium-high)		dB(A)	22-24-28	23-25-29	24-26-30	24-27-32	28-30-33	30-32-35	30-33-36

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C DB/19°C WB, outdoor 35°C DB.
Heating: indoor 20°C DB (68°F DB), outdoor 7°C DB (45°F DB/43°F WB). Pipe length: 7.5 m (24-9/16 feet).
Height difference: 0 m (0 feet).
*2 Static external pressure is set to 15 Pa by default.
*3 [ ] in case of PEFY-P15-63VMS1L-E.

PEFY-M VMA-A

INDOOR UNITS - Ceiling concealed medium to high static pressure



CITY MULTI

Ideal for...

Featuring very precise ambient temperature control, the VMA series ducted unit offers **unparalleled energy efficiency.**

Static pressure

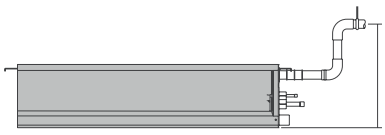
Static external pressure is adjustable to suit the system configuration and installation conditions. The static pressure may be modified to cater for all types of ducting and to allow for functional upgrades such as installing high performance filters, etc. To cater for different layouts and configurations, the static pressure is adjustable within a range from 35Pa to 150 Pa.

Compact unit

The entire VMA series offers extraordinarily compact dimensions: measuring just 250 mm in height, this the perfect solution for installation in cramped spaces.

Condensate lift pump

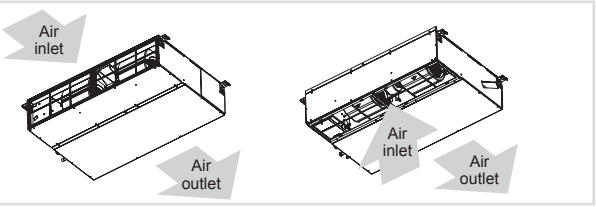
The VMA is equipped with a condensate lift pump.



The optional condensate lift pump makes it possible to place the drain connection up to 700 mm above the unit.

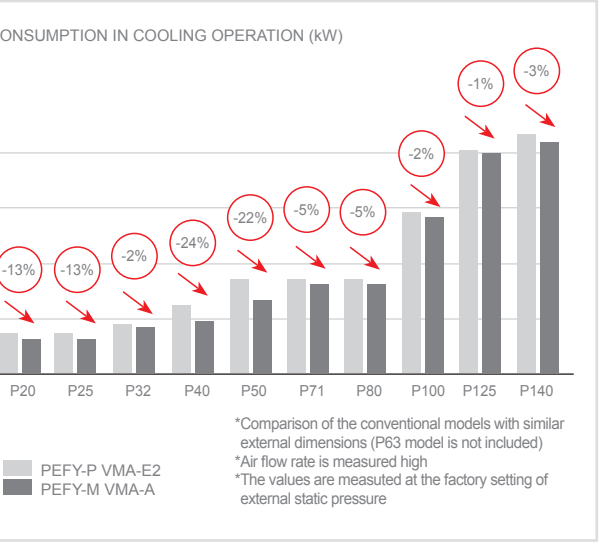
Air inlet direction can easily be changed

By only switching the closing board and air filter, the inlet layout can be altered from the rear inlet. (At the time of factory shipment: rear inlet)



Less power consumption

Improved air pathway inside the fan casing provides smooth air flow for more efficient operation. Additionally, the new higher-efficiency motor reduces energy consumption.



Key Technologies





Technical specifications

MODEL			PEFY-M20VMA-A	PEFY-M25VMA-A	PEFY-M32VMA-A	PEFY-M40VMA-A
Power			1-phase 220-230-240 V 50 Hz			
Capacity in cooling mode *1		kW	2.2	2.8	3.6	4.5
		Btu/h	7,500	9,600	12,300	15,400
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0
		Btu/h	8,500	10,900	13,600	17,100
Power consumption	Cooling	kW	0.032	0.032	0.044	0.047
	Heating	kW	0.030	0.030	0.042	0.045
Current	Cooling	A	0.25	0.25	0.34	0.37
	Heating	A	0.25	0.25	0.34	0.37
External finish			Galvanized steel plate			
Dimensions HxLxW		mm	250 x 700 x 732	250 x 700 x 732	250 x 700 x 732	250 x 900 x 732
Net weight		kg	21	21	21	25
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
Fan	Type x Quantity		Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	6.0 - 7.5 - 8.5	6.0 - 7.5 - 8.5	7.5 - 9.0 - 10.5	10.0 - 12.0 - 14.0
		l/s	100 - 125 - 142	100 - 125 - 142	125 - 150 - 175	167 - 200 - 233
		cfm	212 - 265 - 300	212 - 265 - 300	265 - 318 - 371	353 - 424 - 494
	External static press *2	Pa	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>
Motor	Type		DC Motor			
	Power output	kW	0.085	0.085	0.085	0.121
Air filter			Polypropylene honeycomb fabric (washable)			
Refrigerant pipe diameter	Gas (brazed)	mm	12.7	12.7	12.7	12.7
	Liquid (brazed)	mm	6.35	6.35	6.35	6.35
Local drain pipe diameter			O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")
Sound pressure (low-medium-high)*3		dB(A)	21 - 25 - 27	21 - 25 - 27	23 - 27 - 30	23 - 28 - 31

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The factory setting of airflow mode and external static pressure mode is shown without < >.
*3 Measured in anechoic chamber with 230V mains power and at the factory setting of external static pressure.

Technical specifications

MODEL			PEFY-M50VMA-A	PEFY-M63VMA-A	PEFY-M71VMA-A	PEFY-M80VMA-A
Power			1-phase 220-230-240 V 50 Hz			
Capacity in cooling mode *1		kW	5.6	7.1	8.0	9.0
		Btu/h	19,100	24,200	27,300	30,700
Capacity in heating mode*1		kW	6.3	8.0	9.0	10.0
		Btu/h	21,500	27,300	30,700	34,100
Power consumption	Cooling	kW	0.066	0.087	0.080	0.080
	Heating	kW	0.064	0.085	0.078	0.078
Current	Cooling	A	0.51	0.66	0.57	0.57
	Heating	A	0.51	0.66	0.57	0.57
External finish			Galvanized steel plate			
Dimensions HxLxW		mm	250 x 900 x 732	250 x 900 x 732	250 x 1,100 x 732	250 x 1,100 x 732
Net weight		kg	25	27	30	30
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
Fan	Type x Quantity		Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	12.0 - 14.5 - 17.0	13.5 - 16.0 - 19.0	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0
		l/s	200 - 242 - 283	225 - 267 - 317	242 - 300 - 350	242 - 300 - 350
		cfm	424 - 512 - 600	477 - 565 - 671	512 - 636 - 742	512 - 636 - 742
	External static press*2	Pa	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>
Motor	Type		DC Motor			
	Power output	kW	0.121	0.121	0.121	0.121
Air filter			Polypropylene honeycomb fabric (washable)			
Refrigerant pipe diameter	Gas (brazed)	mm	12.7	15.88	15.88	15.88
	Liquid (brazed)	mm	6.35	9.52	9.52	9.52
Local drain pipe diameter			O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")
Sound pressure (low-medium-high)*3		dB(A)	24 - 31 - 34	27 - 31 - 35	25 - 31 - 34	25 - 31 - 34

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The factory setting of airflow mode and external static pressure mode is shown without < >.
*3 Measured in anechoic chamber with 230V mains power

Technical specifications

MODEL			PEFY-M100VMA-A	PEFY-M125VMA-A	PEFY-M140VMA-A
Power			1-phase 220-230-240 V 50 Hz		
Capacity in cooling mode *1		kW	11.2	14.0	16.0
		Btu/h	38,200	47,800	54,600
Capacity in heating mode*1		kW	12.5	16.0	18.0
		Btu/h	42,700	54,600	61,400
Power consumption	Cooling	kW	0.142	0.199	0.208
	Heating	kW	0.140	0.197	0.206
Current	Cooling	A	0.97	1.23	1.34
	Heating	A	0.97	1.23	1.34
External finish			Galvanized steel plate		
Dimensions HxLxW		mm	250 x 1,400 x 732	250 x 1,400 x 732	250 x 1,600 x 732
Net weight		kg	37	38	42
Heat exchanger			Cross fin (Aluminum fin and copper tube)		
Fan	Type x Quantity		Sirocco x 3	Sirocco x 3	Sirocco x 3
	Air flow (low-medium-high)	m^3/min	23.0 - 28.0 - 32.0	28.0 - 34.0 - 37.0	29.5 - 35.5 - 40.0
		l/s	383 - 467 - 533	467 - 567 - 617	492 - 592 - 667
		cfm	812 - 989 - 1,130	989 - 1,201 - 1,306	1,042 - 1,254 - 1,412
	External static press*2	Pa	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>
Motor	Type		DC Motor		
	Power output	kW	0.300	0.300	0.300
Air filter			Polypropylene honeycomb fabric (washable)		
Refrigerant pipe diameter	Gas (swaged)	mm	15.88	15.88	15.88
	Liquid (swaged)	mm	9.52	9.52	9.52
Local drain pipe diameter			O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")
Sound pressure (low-medium-high)*3		dB(A)	30 - 35 - 38	34 - 38 - 40	33 - 37 - 40

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The factory setting of airflow mode and external static pressure mode is shown without < >.
*3 Measured in anechoic chamber with 230V mains power

PEFY-P VMHS-E

INDOOR UNITS - Ceiling concealed high static pressure

CITY MULTI

Four levels of external static pressure settings

Although the conventional models only had three levels of external static pressure, the new models offer four levels of external static pressure. The additional external static pressure capacity provides flexibility for duct extension, branching and air outlet configuration.

PEFY-P VMHS-E	P40	P50	P63	P71	P80	P100	P125	P140
External static pressure (Pa)	50-<100>-<150>-<200>							

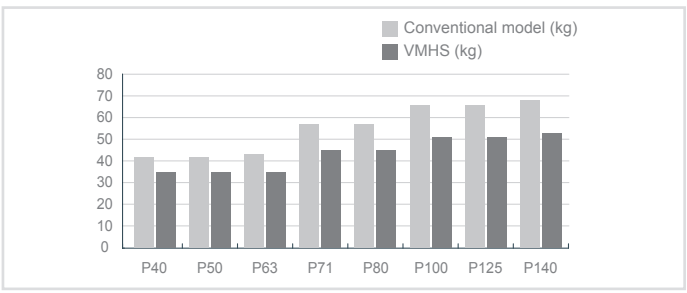
The factory setting of external static pressure is shown without < >.
Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.

Three fan speeds (Low/Mid/High) to choose from

The conventional models had two levels of fan speed, the new models offer three levels of fan speed (Low/Mid/High). Combined with a wider selection of external static pressure levels, the new models offer optimal operation settings to suit the air-conditioning load of an Installation space.

Reduction weight

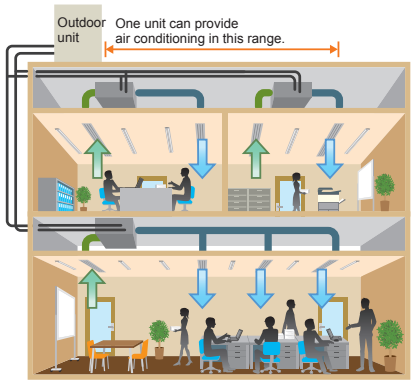
Downsizing of the motor helped reduce unit weight, offering easier installation.



The use of DC motor

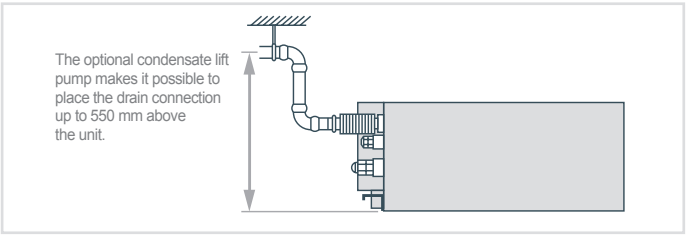
The new models are equipped with high-efficiency DC motors as compared to the AC motors on older models, which reduced power consumption. On the P80 models, power consumption is reduced by 59%*.

*Comparison made at 50 Hz, 220 V, 100 Pa Low fan speed



Optional drain pump

Use of high-efficiency DC motor for the drain pump motor on the new models reduces power consumption by 90%, in comparison to that on the conventional models. The pump head height of 550 mm provides for greater piping design flexibility.



Key Technologies

DC Inverter | ACO | AUTO | Drain Lift Up | Self Diagnosis | Auto Restart | Offset -4° | Low Temp Cooling

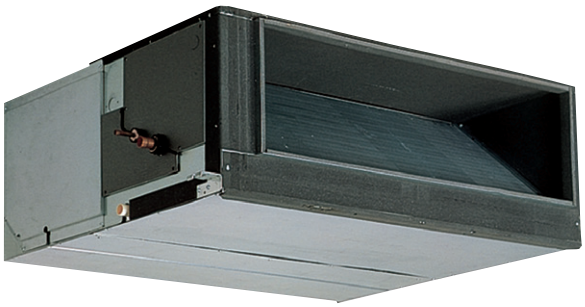
Technical specifications

MODEL			PEFY-P40VMHS-E	PEFY-P50VMHS-E	PEFY-P63VMHS-E	PEFY-P71VMHS-E	PEFY-P80VMHS-E	PEFY-P100VMHS-E	PEFY-P125VMHS-E	PEFY-P140VMHS-E
Power			A single-phase, 220-230-240V 50/60 Hz							
Capacity in cooling mode *1		kW	4,5	5,6	7,1	8,0	9,0	11,2	14,0	16,0
		Btu/h	15,400	19,100	24,200	27,300	30,700	38,200	47,800	54,600
Capacity in heating mode*1		kW	5,0	6,3	8,0	9,0	10,0	12,5	16,0	18,0
		Btu/h	17,100	21,500	27,300	30,700	34,100	42,700	54,600	61,400
Power consumption	Cooling	kW	0,055	0,055	0,090	0,075	0,090	0,160	0,160	0,190
	Heating	kW	0,055	0,055	0,090	0,075	0,090	0,160	0,160	0,190
Current	Cooling	A	0,41-0,39-0,38	0,41-0,39-0,38	0,64-0,62-0,59	0,54-0,52-0,50	0,63-0,61-0,58	1,05-1,01-0,96	1,05-1,01-0,96	1,24-1,19-1,14
	Heating	A	0,41-0,39-0,38	0,41-0,39-0,38	0,64-0,62-0,59	0,54-0,52-0,50	0,63-0,61-0,58	1,05-1,01-0,96	1,05-1,01-0,96	1,24-1,19-1,14
External finish			Galvanized							
Dimensions HxLxW		mm	380x745x900	380x745x900	380x745x900	380x1030x900	380x1030x900	380x1195x900	380x1195x900	380x1195x900
Net weight		kg	35	35	35	45	45	51	51	53
Heat exchanger			Cross fins (aluminium fins and copper piping)							
Fan	Type x Quantity		Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	10,0-12,0-14,0	10,0-12,0-14,0	13,5-16,0-19,0	15,5-18,0-22,0	18,0-21,5-25,0	26,5-32,0-38,0	26,5-32,0-38,0	28,0-34,0-40,0
		l/s	167-200-233	167-200-233	225-267-317	258-300-367	300-358-417	442-533-633	442-533-633	467-567-667
		cfm	353-424-494	353-424-494	477-565-671	547-636-777	636-759-883	936-1130-1342	936-1130-1342	989-1201-1412
	Static external press	Pa	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200
Motor	Type		Motor DC							
	Power output	kW	0,121	0,121	0,121	0,244	0,244	0,375	0,375	0,375
Air filter			-	-	-	-	-	-	-	-
Refrigerant pipe diameter	Gas (swaged)	mm	12,7	12,7	15,88	15,88	15,88	15,88	15,88	15,88
	Liquid (swaged)	mm	6,35	6,35	9,52	9,52	9,52	9,52	9,52	9,52
Local drain pipe diameter			O.D 32	O.D 32	O.D 32	O.D 32	O.D 32	O.D 32	O.D 32	O.D 32
Sound pressure (low-medium-high)*2		dB(A)	20-23-27	20-23-27	24-27-32	24-26-30	25-27-30	27-31-34	27-31-34	27-32-36

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given:
Cooling: 27°C DB / 19°C WB, outdoor 35°C DB.
Heating: 27°C DB, outdoor 7°C DB / 6°C WB.
*2 Static pressure is set to 50 Pa by default.
*3 Measured in anechoic chamber.

PEFY-P VMHS-E

INDOOR UNITS - Ceiling concealed high static pressure



CITY MULTI

Ideal for...

The new VMHS series: improved **installation flexibility** and superior performance.

DC Inverter motor

The new VMHS ducted indoor units are equipped with a single-phase DC Inverter electric motor, a solution that offers more precise electronic control and less noise.

Remotely settable static overpressure

The static overpressure may be modified from a remote control.
In addition to a dip switch on the unit, the PAR-41MAA remote control may also be used to modify static external pressure, making installation significantly simpler.
A choice of up to five different settings is available: 50, 100, 150, 200 or 250 Pa.

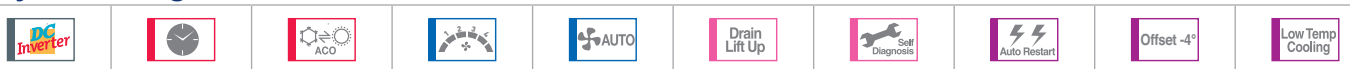
Automatic fan speed adjustment

The automatic fan speed adjustment mode ensures fast, comfortable heating as soon as heating mode is activated. Automatic fan speed control is included in the three standard modes “Low”, “Medium” and “High”, and ensures faster, comfortable air conditioning by increasing the air flow speed on activation and then reducing speed once stable comfort levels are attained.

Quieter

The VMHS series is 15% quieter than the previous VMH model.

Key Technologies



Technical specifications

MODEL			PEFY-P200VMHS-E	PEFY-P250VMHS-E
Power			A single-phase, 220-240V, 50Hz	
Capacity in cooling mode *1		kW	22.4	28.0
		Btu/h	76,000	95,500
Capacity in heating mode*1		kW	25.0	31.5
		Btu/h	72,300	90,400
Power consumption	Cooling	kW	0.63/0.63/0.63	0.82/0.82/0.82
	Heating	kW	0.63/0.63/0.63	0.82/0.82/0.82
Current	Cooling	A	3.47/3.32/3.18	4.72/4.43/4.14
	Heating	A	3.47/3.32/3.18	4.72/4.43/4.14
External finish			Galvanised	
Dimensions HxLxW		mm	470 x 1250 x 1120	470 x 1250 x 1120
Net weight		kg	97	100
Heat exchanger			Cross Fin	
Fan	Type x Quantity		Sirocco x 2	
	Air flow (low-medium-high)	m^3/min	50-61-72	58-71-84
	Static external press*2	Pa	(50)/(100)/150/(200)/(250)	
Motor	Type		Single-phase induction motor	
	Power output	kW	0.87	0.87
Air filter			-	-
Refrigerant pipe diameter	Gas (swaged)	mm	19.05	22.2
	Liquid (swaged)	mm	9.52	9.52
Local drain pipe diameter			32	32
Sound pressure (low-medium-high)*3		dB(A)	36-39-43	39-42-46

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given:
Cooling: 27°C DB / 19°C WB, outdoor 35°C DB.
Heating: 27°C DB, outdoor 7°C DB / 6°C WB.
*2 Static pressure is set to 150 Pa by default.
*3 Measured in anechoic chamber.

PCFY-P VKM-E

INDOOR UNITS - Ceiling-suspended

CITY MULTI

Ideal for...

Designed and built for quiet operation and simple maintenance, these units deliver efficient, comfortable air conditioning performance.

Optimised air flow

Air flow speed is optimised for the height of the ceiling. The ideal air flow setting may be selected for ceilings up to 4.2m in height, maximising both air conditioning efficacy and comfort.

Extremely simple installation

With the direct mount system, it is not necessary to remove the mounting from the main unit, cutting installation times.
The condensate drain pipes may be connected on the left or right of the unit.

Automatic fan speed adjustment

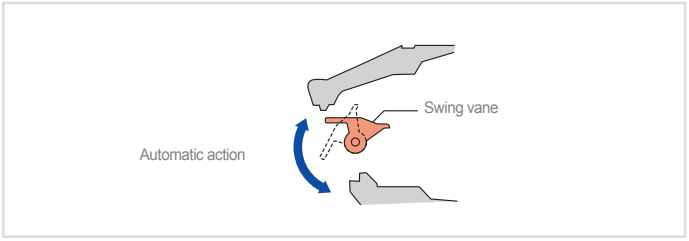
As well as the 4 manual fan speed settings, the PCFY series may also be set to automatically adjust fan speed in relation to ambient conditions: the fan speed is always set to the highest setting when the unit is switched on, to reach the desired conditions more quickly, and is reduced automatically near the setpoint for stable comfort.

Extra slim

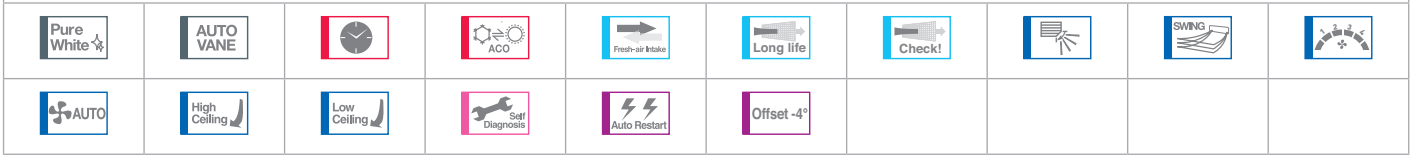
Extremely slim and with elegant curves, the PCFY series is perfectly suited to any interior. The unit also features a single air outlet, meaning that the automatic swing vane also doubles as a shutter when the unit is off.

Automatic swing vane

The automatic swing vane mode distributes air more uniformly.
The vane swings upwards and downwards automatically to distribute air effectively into every corner of the room.



Key Technologies



Technical specifications

MODEL			PCFY-P40VKM-E	PCFY-P63VKM-E	PCFY-P100VKM-E	PCFY-P125VKM-E
Power			A single-phase, 220-230-240VAC 50Hz			
Capacity in cooling mode*1		kW	4.5	7.1	11.2	14.0
		Btu/h	15400	24200	38200	47800
Capacity in heating mode*1		kW	5.0	8.0	12.5	16.0
		Btu/h	17100	27300	42700	54600
Power consumption	Cooling	kW	0.04	0.05	0.09	0.11
	Heating	kW	0.04	0.05	0.09	0.11
Current	Cooling	A	0.28	0.33	0.65	0.76
	Heating	A	0.28	0.33	0.65	0.76
External finish			Munsell 6.4Y 8.9/ 0.4			
Dimensions HxLxW		mm	230x960x680	230x1280x680	230x1600x680	230x1600x680
Net weight		kg	24	32	36	38
Heat exchanger			Cross fins (aluminium fins and copper piping)			
Fan	Type x Quantity		Sirocco x 2	Sirocco x 3	Sirocco x 4	Sirocco x 4
	Air flow (low-medium-high)	m^3/min	10-11-12-13	14-15-16-18	21-24-26-28	21-24-27-31
		l/s	167-183-200-217	233-250-267-300	350-400-433-467	350-400-450-517
		cfm	353-388-424-459	494-530-565-636	742-847-918-989	742-847-953-1095
	Static external press	Pa	0	0	0	0
Motor	Type		Single-phase DC motor			
	Power output	kW	0.090	0.095	0.160	0.160
Air filter			Polypropylene honeycomb fabric (long life)			
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø15.88	ø15.88 / ø19.05 (compatibile)	ø15.88 / ø19.05 (compatibile)
	Liquid (swaged)	mm	ø6.35	ø9.52	ø9.52	ø9.52
Local drain pipe diameter			O.D. 26 (1)	O.D. 26 (1)	O.D. 26 (1)	O.D. 26 (1)
Sound pressure (low-medium-high)*2		dB(A)	29-32-34-36	31-33-35-37	36-38-41-43	36-39-42-44

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium1-medium2-high modes.
*3 Measured in anechoic chamber.

PKFY-P VLM-E

INDOOR UNITS - Wall-mounted

CITY MULTI

New design

A sharp and simple form that combines beauty and function. The simple square design harmonizes beautifully with the straight lines created by the intersection of the walls, floor and ceiling of the space. With a new white body color, it is the ideal solution for residential applications, offices and large stores.

New line-up

New exclusive P10 model is added in wall mounted lineup. P10 size allows to respond to the needs of narrow spaces conditioning them finely. In addition, miniaturization of conventional P32 model has been realized. It contributes to space saving of installation area.

Capacity	P10	P15	P20	P25	P32	P40	P50	P63	P100
VLM	NEW	•	•	•	•	•	•		

Horizontal airflow

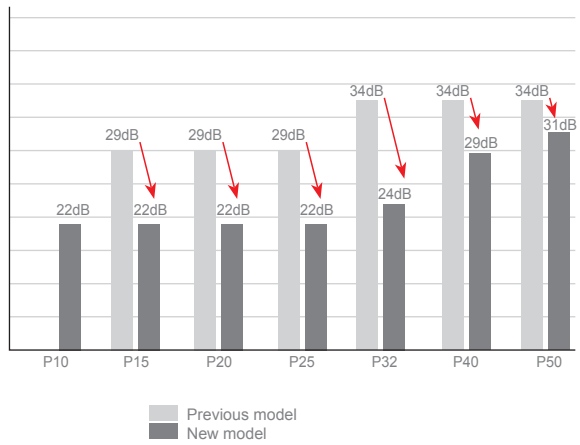
The vane angle can be set to five steps, including the one that allows horizontal air flow, reducing the feeling of draft. Besides, 4 steps of air speed are available.

		Fan Speed	Vane Control	
			Vane Angle	Swing mode
Conventional	PKFY-P** VBM	4 speeds	4 steps	---
	PKFY-P** VHM	3 speeds + AUTO	5 steps	✓
NEW	PKFY-P** VLM-E	4 speeds + AUTO	5 steps	✓

Quietness...

The noise level has been significantly reduced compared to the conventional model by reviewing the unit structure and improving the line flow fan.

PKFY-P VLM SPL (Lo)



Key Technologies




Technical specifications

MODEL			PKFY-P10VLM-E	PKFY-P15VLM-E	PKFY-P20VLM-E	PKFY-P25VLM-E	PKFY-P32VLM-E	PKFY-P40VLM-E	PKFY-P50VLM-E
Power			A single-phase, 220-240V 50Hz, A single-phase, 220-230V 60Hz						
Capacity in cooling mode*1		kW	1.2	1.7	2.2	2.8	3.6	4.5	5.6
		Btu/h	4100	5800	7500	9600	12300	15400	19100
Capacity in heating mode*1		kW	1.4	1.9	2.5	3.2	4.0	5.0	6.3
		Btu/h	4800	6500	8500	10900	13600	17100	21500
Power consumption	Cooling	kW	0.02	0.02	0.02	0.03	0.04	0.04	0.05
	Heating	kW	0.01	0.01	0.01	0.02	0.03	0.03	0.04
Current	Cooling	A	0.20	0.20	0.20	0.25	0.35	0.35	0.45
	Heating	A	0.15	0.15	0.15	0.20	0.30	0.30	0.40
External finish			Plastic (0.7PB 9.2/0,4)						
Dimensions HxLxW		mm	299 x 773 x 237					299 x 898 x 237	
Net weight		kg	11 (25)					13 (29)	
Heat exchanger			Cross fin (Aluminium fin and copper tube)						
Fan	Type x Quantity		Line flow fan x 1						
	Air flow *2	m^3/min	3.3-3.5-3.8-4.2	4.0-4.2-4.4-4.7	4.0-4.4-4.9-5.4	4.0-4.6-5.4-6.7	4.3-5.4-6.9-8.4	6.3-7.4-8.6-10.0	6.8-8.3-10.2-12.4
		l/s	55-58-63-70	67-70-73-78	67-73-82-90	67-77-90-112	72-90-115-140	105-123-143-167	113-138-170-207
		cfm	117-124-134-148	141-148-155-166	141-155-173-191	141-162-191-237	152-191-244-297	222-261-304-353	240-293-360-438
	Static external press	Pa	0 (0)						
Motor	Type		DC motor						
	Power output	kW	0.03						
Air filter			PP Honeycomb						
Refrigerant pipe diameter	Gas (swaged)	mm	Ø 12.7 (Ø1/2)						
	Liquid (swaged)	mm	Ø 6.35 (Ø1/4)						
Local drain pipe diameter			I.D. 16 (5/8)						
Sound pressure *2 *3		dB(A)	22-24-26-28	22-24-26-28	22-26-29-31	22-27-31-35	24-31-37-41	29-34-37-40	31-36-41-46

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium1-medium2-high modes.
*3 Measured in anechoic chamber.

PKFY-P VKM-E

INDOOR UNITS - Wall-mounted

CITY MULTI

Ideal for...

An elegant design with simple, clean lines, compact dimensions and a distinctly recognisable family look: **the ideal solution for residential applications, offices and large stores.**

Smooth front panel with pure white finish

All the models of the PKFY series now feature a smooth front panel instead of the mesh used on the previous version. The units themselves are now finished in pure white instead of standard appliance white to fit in perfectly with the style of practically any interior space.

Capacity	P15	P20	P25	P32	P40	P50	P63	P100
VKM							•	•

Key Technologies VKM (P63-P100)

Pure White	AUTO VANE		ACO		Check!		SWING		Self Diagnosis
Auto Restart	Offset -4°								

Technical specifications

MODEL			PKFY-P63VKM-E	PKFY-P100VKM-E
Power			A single-phase, 220-230-240VAC 50Hz	
Capacity in cooling mode*1		kW	7.1	11.2
		Btu/h	24200	38200
Capacity in heating mode*1		kW	8.0	12.5
		Btu/h	27300	42600
Power consumption	Cooling	kW	0.05	0.08
	Heating	kW	0.04	0.07
Current	Cooling	A	0.37	0.58
	Heating	A	0.30	0.51
External finish			Munsell plastic 1.0Y 9.2/0.2	
Dimensions HxLxW		mm	365x1170x295	365x1170x295
Net weight		kg	21	21
Heat exchanger			Cross fins (aluminium fins and copper piping)	
Fan	Type x Quantity		Linear flow fan x 1	
	Air flow (low-medium-high)	m^3/min	16-20	20-26
		l/s	267-333	333-433
		cfm	565-706	706-918
	Static external press	Pa	0	0
Motor	Type			
	Power output	kW	0.056	0.056
Air filter			Polypropylene honeycomb fabric (washable)	
Refrigerant pipe diameter	Gas (swaged)	mm	ø15.88	ø15.88 / 19.05
	Liquid (swaged)	mm	ø9.52	ø9.52
Local drain pipe diameter			I.D. 16 (5/8)	I.D. 16 (5/8)
Sound pressure (low-medium-high)*2		dB(A)	39-45	41-49

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium1-medium2-high modes, in low-medium-high modes or in low-high modes, depending on model.
Measured in anechoic chamber.

PAC-LV11-E

INDOOR UNITS - Wall-mounted design indoor unit LEV Kit

CITY MULTI

Ideal for...

The new LEV Kit may be used to connect both standard VRF indoor units and Residential line indoor units in the same CITY MULTI VRF system.

The new LEV Kit makes it possible to connect stylish residential indoor units, with looks that are perfectly suited for large installations in applications such as residential buildings and hotels, where design is a decisive factor in the choice of indoor units.

Easy installation and maintenance

The new LEV Kit is easy to install in double ceilings or dedicated niches not only because of its compact size (183 mm H x 355 mm L x 142 mm W), but also and especially because it can be installed vertically or horizontally with no condensate drain.
Additionally, a maximum permissible piping length of 15 m between indoor units and the LEV Kit offers the freedom to install the kit in the most effective position possible.

Residential indoor units

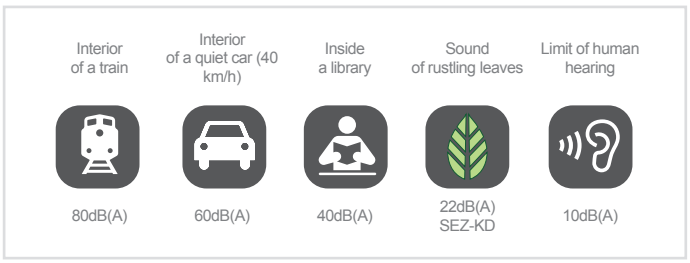
The following residential indoor units may be connected to the LEV Kit:

Types and Sizes available Residential indoor units	15	18	20	22	25	35	42	50
MSZ-LN_VG(2)		•			•	•		•
MSZ-AP_VG(K)	•		•		•	•	•	•
MSZ-EF_VE/VG		•		•	•	•	•	•
MSZ-SF_VA/VE3	•		•	•	•	•	•	•
MFZ-KJ_VE					•	•		•
MFZ-KT_VG					•	•		•

ATTENTION !! FOR DETAILS ON COMPATIBILITY BETWEEN EACH MODEL OF INDOOR UNITS AND OUTDOOR UNITS PLEASE CONTACT YOUR LOCAL DISTRIBUTOR

Unparalleled comfort and air quality

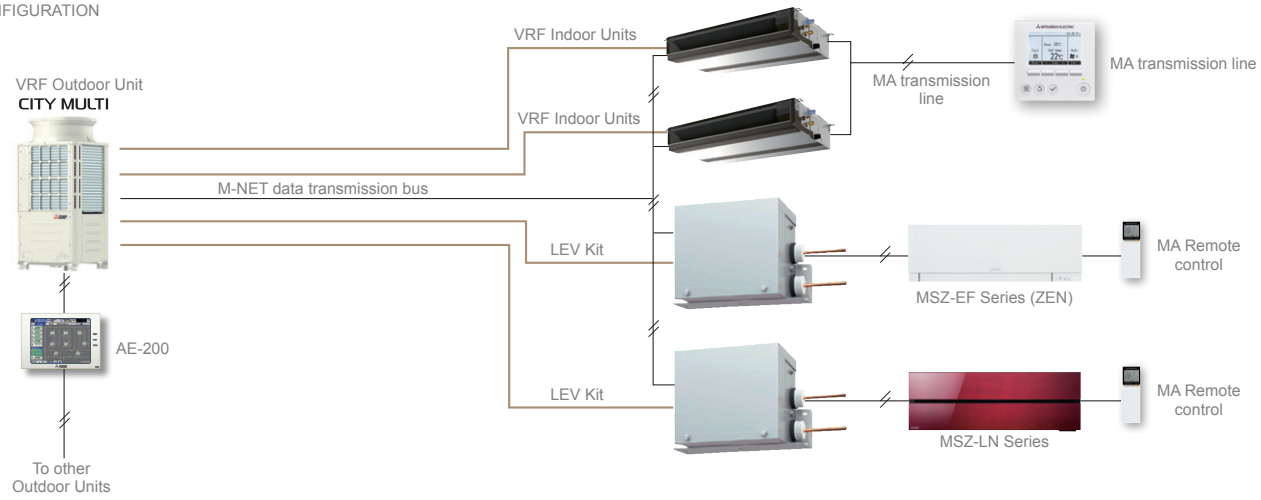
The quality of an environment also depends on perceived noise levels. Mitsubishi Electric air conditioners connected to a VRF CITY MULTI system using the LEV Kit offer the highest levels of acoustic comfort available today on the market.



The residential indoor units also contribute to higher air quality levels with the superior filtration power of air filters with nanoplatinum treatment.

Key Technologies


SYSTEM CONFIGURATION



Technical specifications

MODEL			PAC-LV11-E
Power			A single-phase, 220-240VAC 50Hz
Compatible Family series residential indoor units			MSZ-EF, MSZ-LN, MSZ-SF, MSZ-KJ
Number of branches			1 way
Maximum distance between indoor unit and LEV Kit		m	15
Compatible CITY MULTI outdoor units			Small Y Line - Small Y Compact Line - Y Lines (Ecostandard/ Standard Efficiency/High Efficiency) - Y Line Zubadan (YHM) - Y Line Replace Multi (YJM), R2 Lines (Standard Efficiency/High Efficiency) - R2 Line Replace Multi (YJM), WY Line (YHM) - WR2 Line (YHM)
Dimensions (HxLxW)		mm	180x355x142
Net weight		kg	3.5
Condensate drain			Not necessary
Installation			Vertical Horizontal
Refrigeration pipe diameter	Liquid	mm	6.35 (brazed)
	Gas	mm	-
Compatible remote controls			Standard: Remote control included with optional residential indoor units (purchased separately): 1. MA wired remote control interfaced via MAC-397IF board (optional, for installation in indoor units - purchased separately). 2. ME wired remote control, interfaced via LEV Kit terminal board.

PFFY-P VKM-E

INDOOR UNITS - Design floor-standing unit

CITY MULTI

Ideal for...

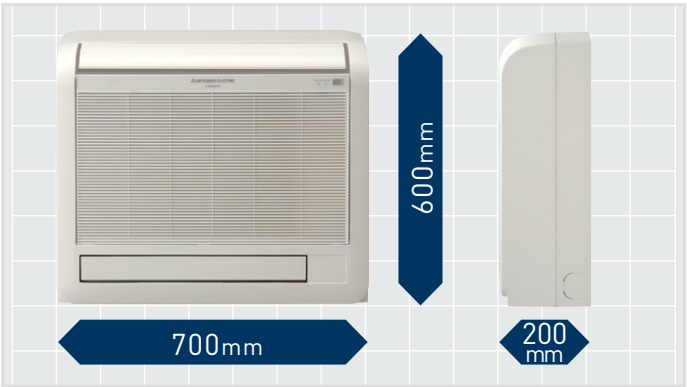
A high performance floor-standing air conditioner unit with an **elegant design** for lounges, bedrooms or offices where style is imperative.

Sophisticated design

A floor-standing air conditioner unit by Mitsubishi Electric boasting an innovative design and combining simple, linear lines with a wide choice of functions. Conceived to leave the walls free, a unit that delivers comfortable cooling performance in summer and pleasant heat in winter. The gloss pure white finish lends the unit a premium look suitable for any interior space. Both the upper and lower air vents are closed when the air conditioner is switched off, giving the unit an elegantly stylish feel. A beautifully stylish and innovative air conditioner from Mitsubishi that suits your most elegant interior spaces to perfection.

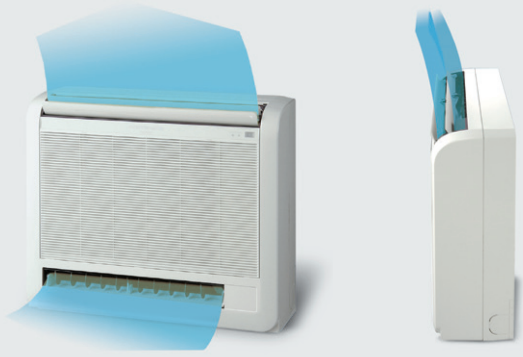
Slim but powerful

The slimline housing of the unit expresses the essence of compactness. The ideal size for a lounge, bedroom and many other rooms. The front panel is removable and washable, making the unit extremely simple to clean. Cleaning your air conditioner simply and regularly will keep it looking great and working perfectly for maximum energy efficiency.

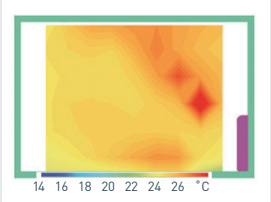


Ideal air distribution

Air is distributed powerfully and effectively via the upper and lower air vents, ensuring a comfortable temperature throughout the room. The angle of the upper vent is settable into 5 different positions (+ swing and automatic modes) from a remote control, while 4 different air speed settings are available. Setting the vane to an almost vertical position prevents undesirable draughts, for even greater comfort.



The air delivered from the upper and lower vents is controlled for optimum comfort and distributed evenly into every corner of the room. In heating mode, the warm air flow is controlled intelligently to reach floor level, making cold feet a thing of the past!



Key Technologies

Pure White | AUTO VANE | ACO | Catechin | Check! | SWING | Self Diagnosis | Auto Restart

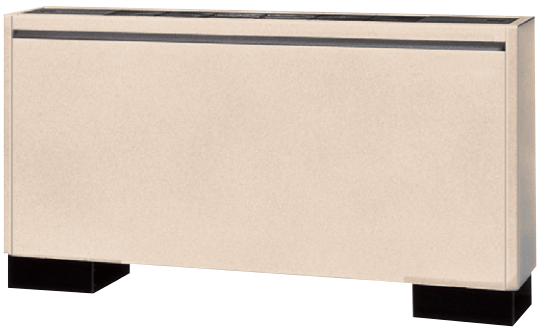
Technical specifications

MODEL			PFFY-P20VKM-E	PFFY-P25VKM-E	PFFY-P32VKM-E	PFFY-P40VKM-E
Power			A single-phase, 220-240V 50Hz			
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5
		Btu/h	7500	9600	12300	15400
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0
		Btu/h	8500	10900	13600	17100
Power consumption	Cooling	kW	0.025	0.025	0.025	0.028
	Heating	kW	0.025	0.025	0.025	0.028
Current	Cooling	A	0.20	0.20	0.20	0.24
	Heating	A	0.20	0.20	0.20	0.24
External finish			Plastic (pure white)			
Dimensions HxLxW		mm	600x700x200	600x700x200	600x700x200	600x700x200
Net weight		kg	15	15	15	15
Heat exchanger			Cross fins (aluminium fins and copper piping)			
Fan	Type x Quantity		Linear flow fan x 2			
	Air flow (low-me-dium-high-extra high)	m^3/min	5.9-6.8-7.6-8.7	6.1-7.0-8.0-9.1	6.1-7.0-8.0-9.1	8.0-9.0-9.5-10.7
	Static external pres.	Pa	0	0	0	0
Motor	Type		DC motor			
	Power output	kW	0.03x2	0.03x2	0.03x2	0.03x2
Air filter			Polypropylene honeycomb fabric (catechin filter)			
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7
	Liquid (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35
Local drain pipe diameter			D.I. 16 (PVC pipe connectable to VP-16)			
Sound pressure (low-medium-high)*2		dB(A)	27-31-34-37	28-32-35-38	28-32-35-38	35-38-42-44

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Measured in anechoic chamber.

PFFY-P VLEM-E

INDOOR UNITS - Floor standing unit



CITY MULTI

Ideal for...

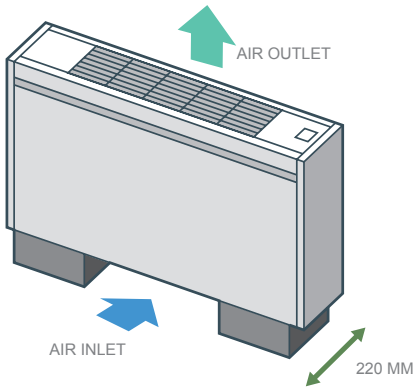
A free floor standing **unit ideal for perimeter zones**. A compact unit for easy conditioning even in the perimeter area. The 220mm deep body (8-11 / 16in.)
Can be easily installed in the perimeter area to achieve effective conditioning in this area as well.

Compact unit

A compact unit offering a simple solution for conditioning perimeter zones. The compact unit, measuring just 220 mm in depth (8-11/16”), is easily installable in perimeter areas to ensure effective conditioning performance in these zones too.

Cooling dehumidification function

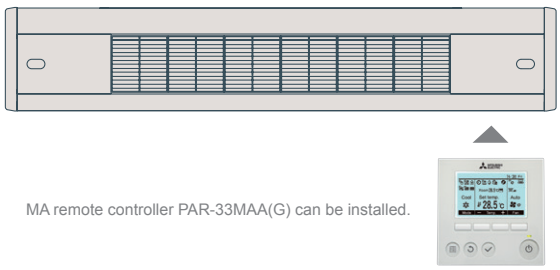
The electronic dehumidifier function uses cooling to dehumidify the air. The compact unit, measuring just 220 mm in depth, is easily installable in perimeter areas to ensure effective conditioning performance in these zones too.



Characteristics of PFFY-P VLEM-E

- Standardised design with simple lines.
- Suitable for all spaces, from offices and shops to hospitals.
- May be equipped with a water vapour impermeable membrane humidifier system.
- Features a specific concealed housing for stowing a remote control unit out of sight.

REMOTE CONTROLLER CAN BE BUILT-IN



MA remote controller PAR-33MAA(G) can be installed.

Key Technologies





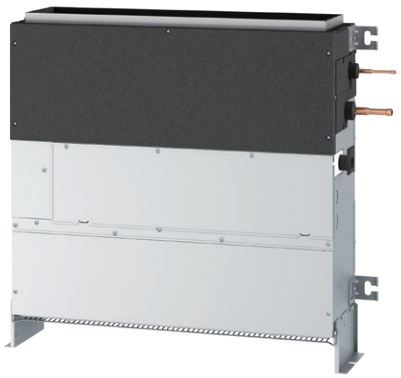
Technical specifications

MODEL			PFFY-P20VLEM-E	PFFY-P25VLEM-E	PFFY-P32VLEM-E	PFFY-P40VLEM-E	PFFY-P50VLEM-E	PFFY-P63VLEM-E
Power			A single-phase, 220-240V, 50Hz / a single-phase, 208-230V, 60Hz					
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	7500	9600	12300	15400	19100	24200
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	8500	10900	13600	17100	21500	27300
Power consumption	Cooling	kW	0.04 / 0.06	0.04 / 0.06	0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
	Heating	kW	0.04 / 0.06	0.04 / 0.06	0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
Current	Cooling	A	0.19 / 0.25	0.19 / 0.25	0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
	Heating	A	0.19 / 0.25	0.19 / 0.25	0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
External finish			Acrylic paint (5Y 8/1)					
Dimensions HxLxW		mm	630x1050x220	630x1050x220	630x1170x220	630x1170x220	630x1410x220	630x1410x220
Net weight		kg	23	23	25	26	30	32
Heat exchanger			Cross fins (aluminium fins and copper piping)					
Fan	Type x Quantity		Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 2	Sirocco x 2	Sirocco x 2
	Air flow	m^3/min	5.5-6.5	5.5-6.5	7.0-9.0	9.0-11.0	12.0-14.0	12.0-15.5
		l/s	92-108	92-108	117-150	150-183	200-233	200-258
		cfm	194-230	194-230	247-318	318-388	424-494	424-547
	Static external pres.	Pa	0	0	0	0	0	0
Motor	Type		Single-phase induction motor					
	Power output	kW	0.015	0.015	0.018	0.030	0.035	0.050
Air filter			Polypropylene honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø12.7	ø15.88
	Liquid (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø6.35	ø9.52
Local drain pipe diameter			D.I. 26 (1) <Accessory pipe O.D. 27 (upper end: O.D. 20)>					
Sound pressure*2*3*4		dB(A)	34-40	34-40	35-40	38-43		40-46

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB.
*2 Air flow/noise levels given for operation in low-high modes.
*3 Measurement point: 1m x 1m, Power: 240V AC/50Hz:
1dB(A) less with 230V AC/50Hz.
2dB(A) less with 220V AC/50Hz.
3dB(A) less with measurement point at 1.5 m x 1.5 m.
*4 Measured in anechoic chamber.

PFFY-P VCM-E

INDOOR UNITS - Floor standing concealed



CITY MULTI

Ideal for...

Built-in floor units: simplified installation for effective air **conditioning performance**.

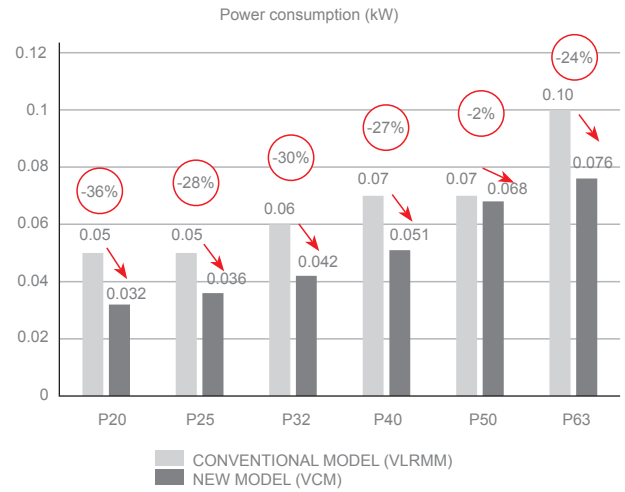
Flexible air-flow and external static pressure setting

The VCM series may be configured with a choice of four different static external pressure settings: 0, 10, 40 and 60 Pa. Besides airflow rate can be selected from 3 patterns (Low-Mid-High).

Reduced power consumption and noise

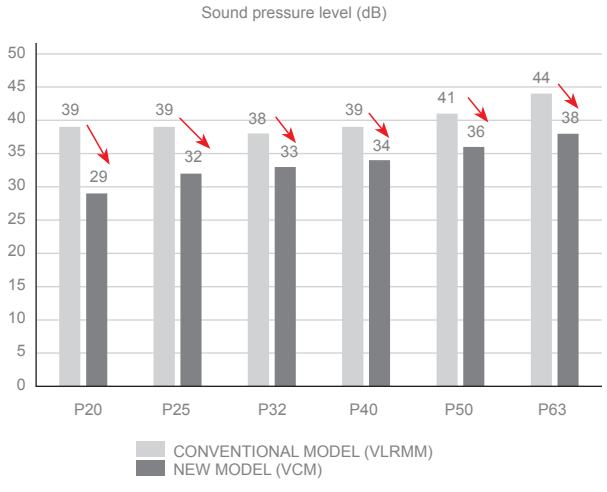
New structure realizes smoother airflow to reduce pressure loss in air pathway. The combination of an improved air pathway structure and components contributes to reduce power consumption and operation noise.

REDUCTION IN POWER CONSUMPTION



*Measurement condition (External static pressure: 40Pa Fan speed: High)
*The unit consumes the same power in both cooling and heating modes.

REDUCTION IN NOISE



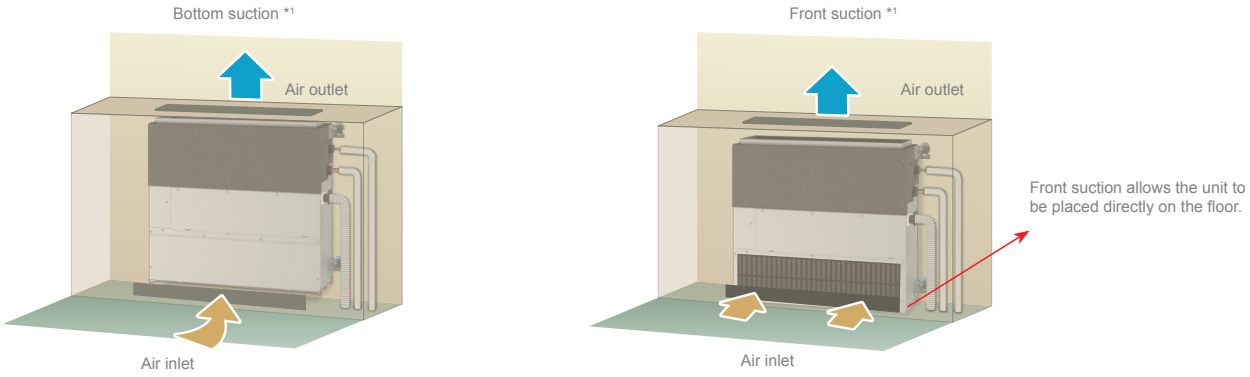
* The sound pressure level in operation is measured at 1.5 m apart from the front side and bottom side of the unit in anechoic room.

Key Technologies VCM

	ACO		Check!			Self Diagnosis	Auto Restart	Low Temp Cooling	

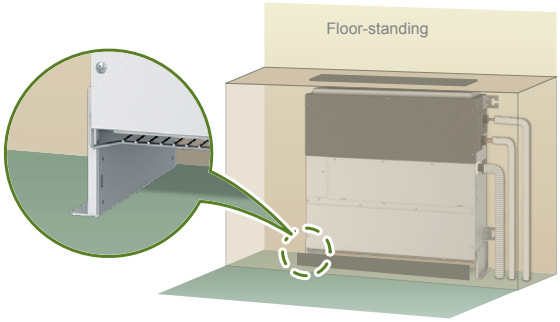
FLEXIBLE INSTALLATION

Selectable air inlet pattern
It is selectable bottom suction or front suction by changing panel, fan guard and filter.



*1 Select a site where the flow of supply and air is not blocked. This unit cannot be placed directly on the floor with bottom suction.
*2 Unit with front suction makes noise than that with bottom suction. It is recommended that the bottom suction to be selected when installing the units in rooms that should be quiet, such as bedrooms.

Floor-standing with legs
The unit can be placed on the floor with the supplied legs.



*Height of unit (with legs) is 690 mm.

Technical specifications

MODEL			PFFY-P20VCM-E	PFFY-P25VCM-E	PFFY-P32VCM-E	PFFY-P40VCM-E	PFFY-P50VCM-E	PFFY-P63VCM-E
Power			A single-phase, 220-240V, 50Hz / a single-phase, 208-230V, 60Hz					
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption*2	Cooling	kW	0.022	0.026	0.031	0.038	0.052	0.058
	Heating	kW	0.022	0.026	0.031	0.038	0.052	0.058
Current*2	Cooling	A	0.25	0.30	0.34	0.38	0.50	0.49
	Heating	A	0.25	0.30	0.34	0.38	0.50	0.49
External finish			Galvanized steel plate					
Dimensions HxLxW*3		mm	615(690)x700x200	615(690)x700x200	615(690)x700x200	615(690)x900x200	615(690)x900x200	615(690)x1,100x200
Net weight		kg	18	18	18.5	22.5	22.5	25.5
Heat exchanger			Cross fin (aluminium fin and copper piping)					
Fan	Type x Quantity		Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 3	Sirocco x 3	Sirocco x 4
	Air flow		(Low-Mid-High)					
		m^3/min	5.5-6.0-7.0	5.5-6.5-8.0	5.5-7.0-8.5	8.0-9.5-11.0	10.0-11.5-13.5	12.0-14.0-16.5
		l/s	83-100-117	92-108-133	92-117-142	133-158-183	167-192-225	200-233-275
		cfm	177-212-247	194-230-282	194-247-300	282-335-388	353-406-477	424-494-583
	Static external pres.	Pa	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>
Motor	Type		DC motor					
	Power output	kW	0.096	0.096	0.096	0.096	0.096	0.096
Air filter			Polypropylene honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (brazed)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø12.7	ø15.88
	Liquid (brazed)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø6.35	ø9.52
Field drainpipe diameter			O.D. 32 (1-1/4)					
Sound pressure*2		dB(A)	21-23-26	22-25-29	23-26-30	25-27-30	28-31-34	28-32-35

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The values are measured at the factory setting of external static pressure (10 Pa).
*3 The values in ( ) show the height of unit with leg.

HVRF hydronic systems

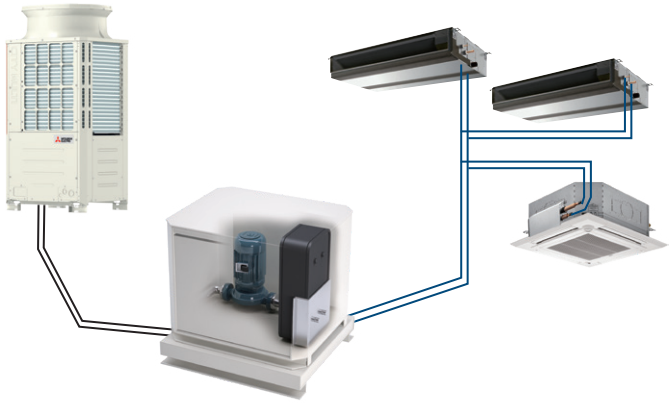
Y Line

R32 HVRF Packaged Hydronic systems Heat Pump

The HVRF Y packaged hydronic system is a new hydronic solution on heat pump version that consists of a water production section composed of a VRF technology Outdoor Unit Y CITY MULTI and a hydronic unit for water distribution.
The system is completed by different types and sizes of hydronic terminals, that can be regulated locally. All components of the hydronic system are branded Mitsubishi Electric.
HVRF hydronic systems are derived from VRF and as such bring with them the advantages of a simplified design and sizing defined by Mitsubishi Electric rules.
HVRF Y systems are environmentally friendly with an important reduction of CO_2 equivalent, thanks to the use of R32 refrigerant gas, with low GWP.

HVRF Y LINE

HYDRONIC UNIT



R2/WR2 Line

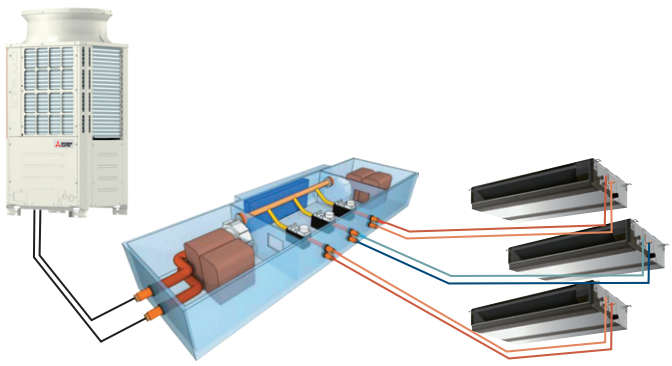
R410A

HVRF packaged hydronic heat pump systems

The HVRF R2 packaged hydronic heat recovery system is a technology based on Mitsubishi Electric's CITY MULTI R2 two-pipe system for simultaneous cooling and heating with heat recovery.
It consists of an R2 (or WR2) outdoor unit of the CITY MULTI series, the innovative Hydronic BC (HBC) distributor which allows the use of refrigerant gas and water as refrigerator fluids, as well as indoor units specially equipped with a water coil.
HVRF hydronic systems are derived from VRF and as such bring with them the advantages of a simplified and guided design in the sizing of all components.
The use of hydronic distribution allows for an up to 45% reduction in refrigerant compared to a traditional VRF system.
HVRF R2 systems have a low environmental impact with an important reduction in CO_2 equivalent.

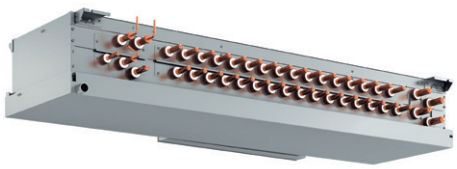
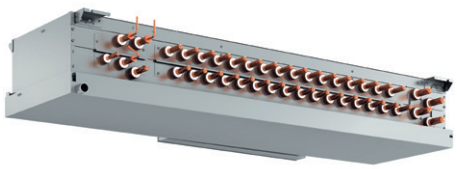
HVRF R2 LINE

HYDRONIC HBC CONTROLLER



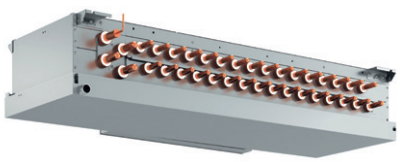
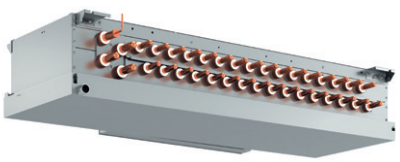
Y Next Stage LINE	**CITY MULTI Y SYSTEMS**	Heat pump systems with continuous heating
R2 Next Stage LINE	**CITY MULTI R2 SYSTEMS**	Simultaneous two-pipe cooling/heating systems with heat recovery and continuous heating.
WR2 LINE	**CITY MULTI WR2 SYSTEMS**	Heat recovery systems with water condensation/evaporation.

Outdoor units	**8**	**10**
	M200	**M250**
Model	**WM250**	
HYDRONIC UNIT **CMH-WM V-A**		
	same external dimensions/different internal structures depending on capacity	

Type of HBC	**Main**	
Model	**CMB-WM108V-AA**	**CMB-WM1016V-AA**
Number of connections	**8**	**16**
HYDRONIC BC CONTROLLER **HBC**		

		**SINGLE Y** PUHY-M YNW-A1 (-BS) - HP 8~20
		**SINGLE R2** PURY-P YNW-A1(-BS) - HP 8~20
		**SINGLE WR2** PQRY-P YLM-A1 - HP 8~20

	12	14	16	18	20
	M300	M350	M400	M450	M500
	WM350		WM500		
					
	same external dimensions/different internal structures depending on capacity				

	Sub	
	CMB-WM108V-AB	CMB-WM1016V-AB
	8	16
		

Sistem					HP	4,5	
					Model	P112	
Air-cooled	HVRF Heat pump	Y Line Heat Pump	PUHY-M YNW-A1 (-BS)		SINGLE		
					DOUBLE		
					TRIPLE		
	HVRF Heat recovery	R2 Line Heat Pump	PURY-P YNW-A1(-BS)		SINGLE		
					DOUBLE		
Water-cooled	HVRF Heat recovery	WR2 Line Heat recovery	PQRY-P YLM-A1		SINGLE		
					DOUBLE		

	5	6	8	10	12	14	16	18	20
	P125	P140	P200	P250	P300	P350	P400	P450	P500
			8	10	12	14	16	18	20
			8	10	12	14	16	18	20
			8	10	12	14	16	18	20

Key Technologies

Mitsubishi Electric: state of the art technology and continuous pursuit of improvement. Quality, innovation and performance of HYDRONIC VRF CITY MULTI systems.

Technology

Lower concentration of GAS

Lower concentration of refrigerant in the building and confined only in the section between the Outdoor Unit and the Hydronic Unit/Hydronic Branch Controller.

High SHF (Sensible Heat Factor) cooling

Thanks to HYDRONIC VRF technology it is possibile to design systems with typical VRF simplicity and higher confort thanks to the use of water as heat carrier. Mitsubishi Electric water-fed indoor units grant a really stable temperature control, with higher Sensible Heat Factor (SHF) than traditional direct expantion systems. re rispetto ad un sistema ad espansione diretta tradizionale.

Reduced defrost and transitory time

Using water as heat carrier also gives an additional advantage during heating periods, reducing defrost time. Thanks to water thermal inertia it is possible to resume releasing heat to the environment just after a defrost cycle, minimizing the system turn-off periods.

Silent functioning with water cooled units

Indoor units of the HYDRONIC VRF are equipped with water-fed heat exchangers. The lack of LEV valve in the units grants a very silet functioning regime, particularly suited for “sensible” environments such as libraries, schools, bedrooms.

Modular system for fractionate and progressive installation

HYDRONIC VRF system is particularly suited for designs which require partial installation or applications catatterized by fractionated realization schedule. This often occurs in real-estate of commercial/residential buildings intended for different type of users, which are often sold/realized separately.

Modulating regulation of the pump based on the load and capacity required

The new HYDRONIC VRF system contains all the components necessary for the distribution and regulation typical of a hydronic system. Thanks to the presence of two variable speed circulators (inverters), the HVRF system is able, in total autonomy, to regulate the flow of water destined for the individual hydronic units (indoor units) according to the thermal load required by the individual rooms.

M-NET control system

Being part of the CITY MULTI family, even the HYDRONIC VRF system can use the control and communication systems (M-Net) of the VRF systems and consequently can benefit from the M-NET Power function which allows the system to continue to operate normally even in the event of a power failure of one or more indoor units. This function is particularly advantageous and effective in all those cases in which the air conditioning system is shared between several users (shopping centre, condominium, etc.).

Valves, pumps, exchangers and integrated control and regulation systems

The innovative HYDRONIC VRF distributor is the only device in the world that uses refrigerant gas and water as carrier fluids thanks to special plate heat exchangers. Inside it there are all the components necessary for the distribution and regulation of the water flow to the individual indoor units. The presence of two plate heat exchangers allows the system to always be ready to produce hot and cold water at the same time; supply and return manifolds, water flow regulation valves and two variable flow pumps allow the system to independently manage the hydronic distribution to the individual indoor units based on a complex series of parameters acquired by the same system.

Accessories and safety devices

When installing the HYDRONIC VRF system, it will be sufficient to provide for

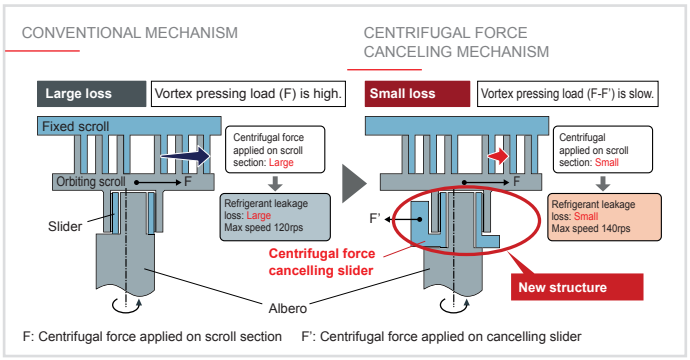
- 20 mm diameter copper or multilayer piping
- Expansion vessel to be connected directly to the HBC Controller
- Supply line (water load) equipped with shut-off valve, safety valve, filter, pressure reducer
- Condensate drain line
- 220V power supply line

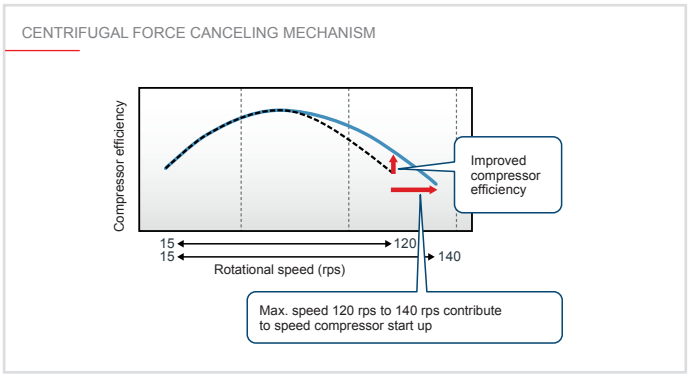
NEXT STAGE generation Compressor NEXT STAGE GENERATION

The compressor, known as the heart of the air conditioner, has been newly developed. A new centrifugal force canceling mechanism and a new multi-port mechanism have been developed. In addition, we have mounted a high-efficiency motor. The synergetic effect of these new technologies increases the compressor performance and efficiency, and also helps to improve the performance of the outdoor unit.

Centrifugal force canceling mechanism (8 to 14HP)

The structure of the scroll compressor causes a centrifugal force during operation. Conventionally, that centrifugal force is applied onto the scroll section. This causes refrigerant to leak, and restricts the increase in rotational speed to a maximum of 120rps. With the new compressor, a new structure (centrifugal force canceling mechanism) has been mounted to suppress the centrifugal force. This mechanism successfully suppresses the centrifugal force generated at the scroll section, reduces refrigerant leakage losses, and increases the compressor efficiency. The maximum rotational speed has been increased from the conventional 120rps to 140rps.
This new mechanism also speeds up the start of operation, and enables operations such as preheat defrost operation and the smooth auto-shift startup mode.



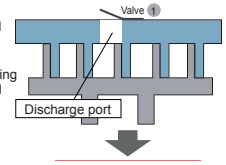


Multi-port mechanism

Efficient partial load operation is realised by avoiding overcompression. With the scroll compressor, the distance of the compression process in the scroll is usually fixed, so over-compression occurs during low loads and low rotation. The new compressor is equipped two sub-ports in addition to the conventional discharge port to reduce this over-compression loss during low loads. In operation conditions having a low compression rate, the distance in the compression process is kept short by that successfully avoiding unnecessary compression, and contributing to efficient partial load operation.

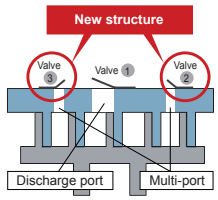
CONVENTIONAL STRUCTURE

		Operation pattern	
		Partial load	Rating, high, pressure difference
Main port	Valve ①	Open	Open



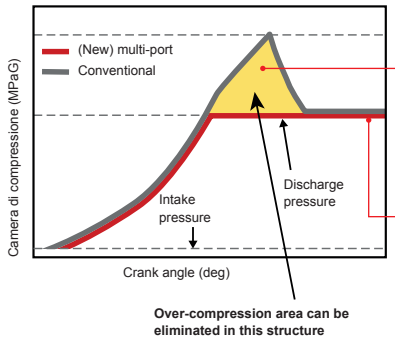
NEW STRUCTURE WITH MULTI-PORT DESIGN

		Operazione	
		Carico parziale	Carico nominale
Main port	Valve ①	Open*	Open
Sub port	Valve ②	Open	Closed
	Valve ③	Open	Closed



*The sub-port is opened during partial load operation to discharge the over-compressed gas.

REDUCED OVER-COMPRESSION LOSS (MULTI-PORT)



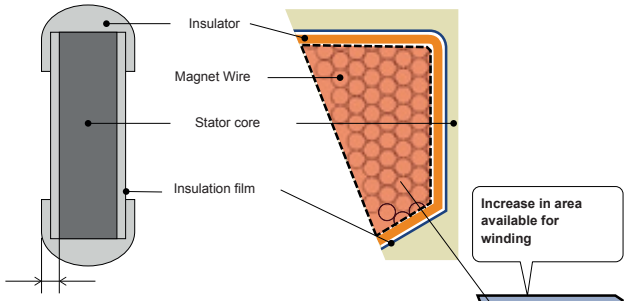
Conventional model
Conventionally, gas refrigerant is compressed to a set pressure, and then lowered to the target discharge pressure at which it is discharged. This causes drive losses from over-compression.

Multi-port
When the target discharge pressure is reached, the multiport opens, and the gas refrigerant is discharged. This reduces drive losses caused by over-compression.

Improved high-efficiency motor

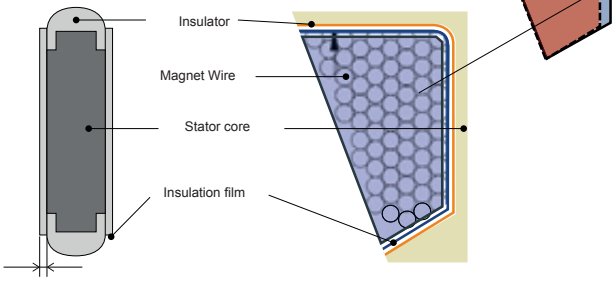
The insulator section that traditionally created a dead space is eliminated by insulating the motor's stator film. Since winding can be set in that section, the winding area can be increased by approx. 9%. The wire diameter has also been increased by two ranks, so the resistance between terminals is reduced, and the insulation distance is shorter. This improves the motor's operation performance and contributes to high-efficiency operation of the compressor.

CONVENTIONAL MODEL (YLM)



The insulator section is large, and the area where the copper wire can be wound is small.

NEW MODEL (YNW)



The motor can be wound in the section where the insulator was, and a larger wire diameter can be used.

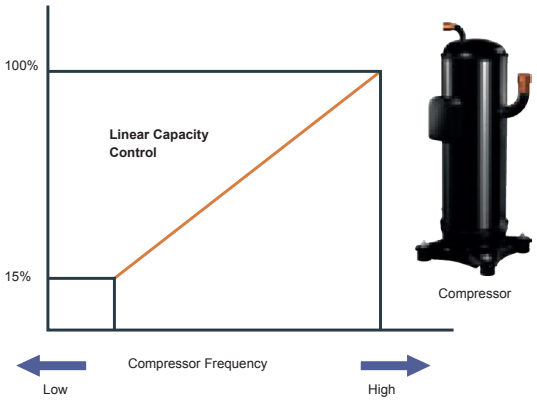
Inverter-driven compressor technology

All CITY MULTI compressors are of the inverter-driven type, capable of precisely matching a building's cooling and heating demands.

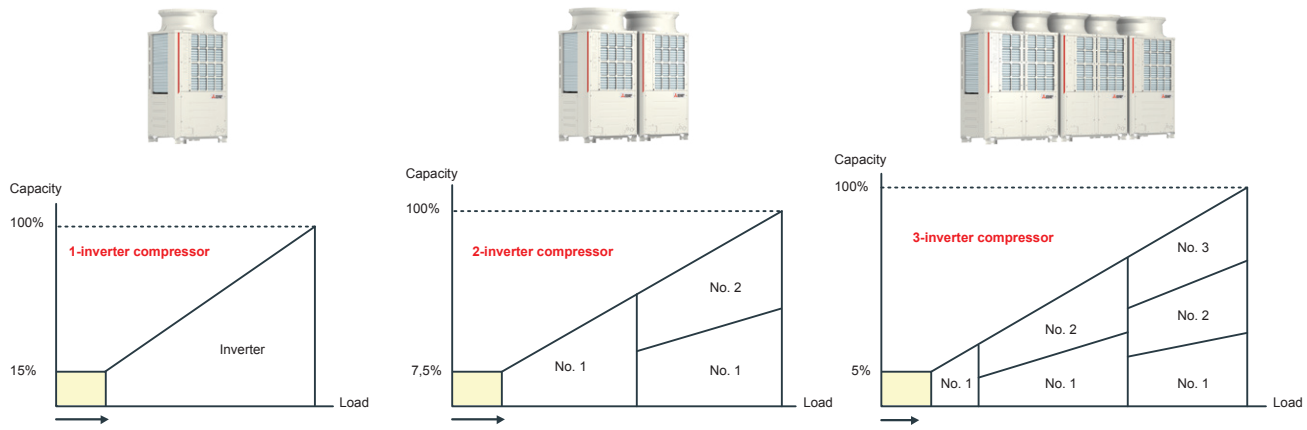
The compressor varies its speed to match the indoor cooling or heating demand and therefore only consumes the energy that is required. When an inverter driven system is operating at partial load, the energy efficiency of the system is significantly higher than that of a standard fixed speed, non-inverter system.

The fixed speed system can only operate at 100%, however, partial load conditions prevail for the majority of the time. Therefore, fixed speed systems cannot match the annual efficiencies of inverter driven systems. Using proven single inverter driven compressor technology, the CITY MULTI range is favored by the industry for low starting currents (just 8 amps for a 20HP outdoor unit) and smooth transition across the range of compressor frequencies.

HEATING / COOLING CAPACITY



STABLE AND SMOOTH OPERATION



Functions

M-Net Power

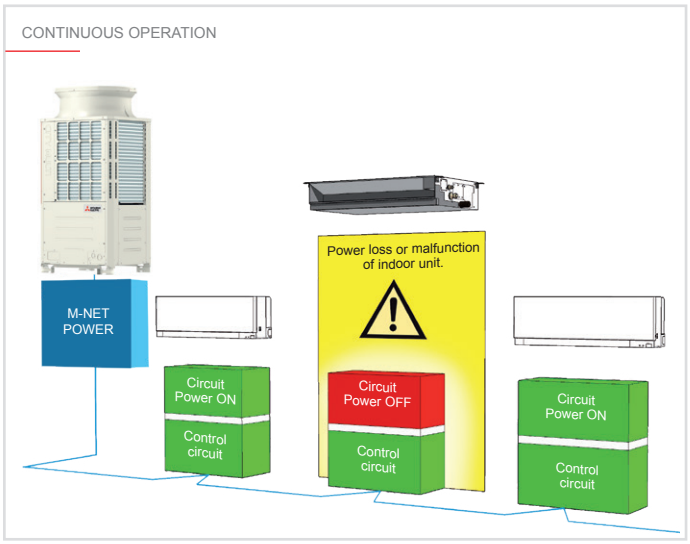
With the M-Net transmission line and the use of separate power and control circuits for indoor units, the following states can be identified automatically:

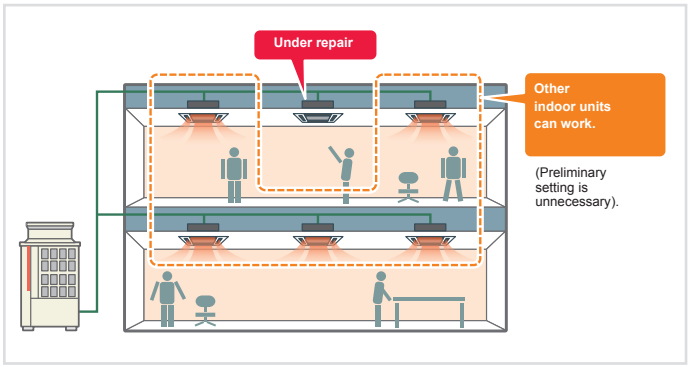
- indoor unit malfunction
- power loss to indoor unit.

In the event of one of these conditions, the outdoor unit isolates the malfunctioning indoor unit or indoor unit receiving no power to ensure the continued electrical and refrigeration functionality of the system with no action required from a technician and/or a system administrator. This allows total flexibility in planning and laying out 220V AC power circuits, without the need for shared main lines and without requiring any additional devices to attain compliance with legislation for electrical systems. This circuit configuration is essential for situations where the system itself is shared by multiple owners or tenants, and where each must be able to electrically isolate their respective indoor terminal sections when required.

Continuous operation

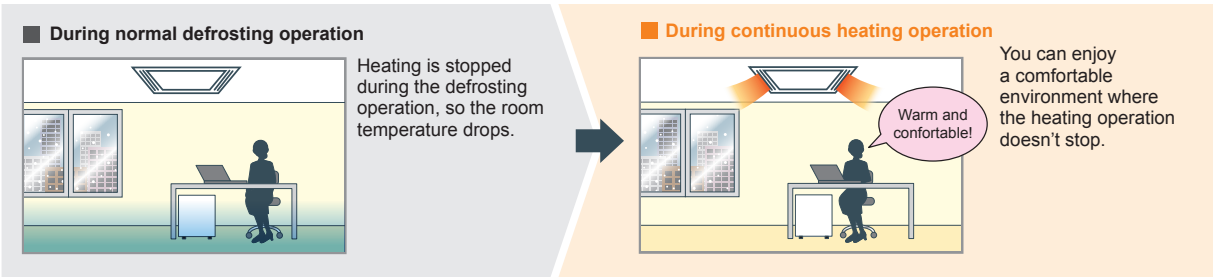
In the event of power loss or partial malfunction of one or more indoor units, the system continues to function uninterruptedly and without requiring any action from a technician and/or system administrator.





Continuous heating operation

Normally, it is necessary to stop the heating operation during defrosting. However, the continuous heating operation method makes it possible to perform defrosting while the heating operation continues.
Reduction in the stoppage time of the heating operation prevents drops in room temperature.
Use a dip switch on the outdoor unit to switch between the continuous heating operation method and the conventional defrosting method.



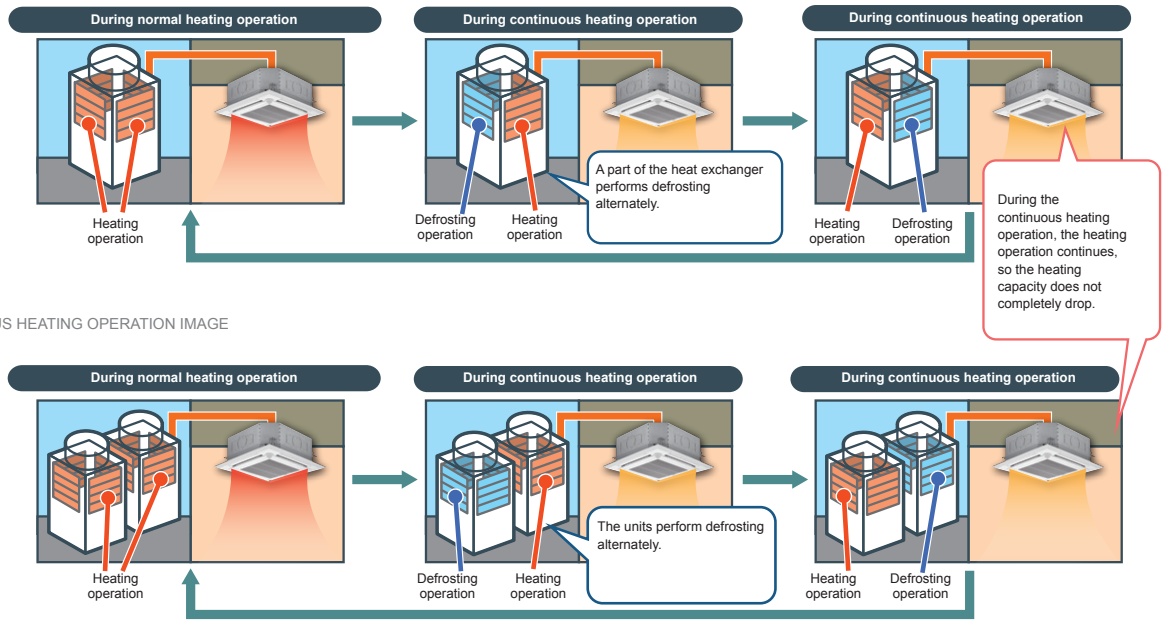
Continuous heating operation image (single unit)

The heat exchanger of the outdoor unit is split into parts. Even when defrosting is necessary, the heating operation is continued with a part of the heat exchangers.

Continuous heating operation image (combination)

With the combination model, units perform defrosting alternately. While one unit is performing defrosting, the other continues heating.

CONTINUOUS HEATING OPERATION IMAGE



NEW

Preheat defrost operation

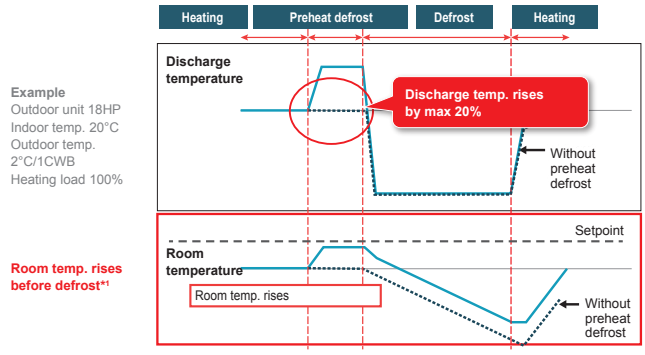
The new outdoor unit is equipped with a preheat defrost operation that raises the discharge temperature of the air before beginning defrost operation. This contributes to raising the room temperature before the start of defrost operation and prevents room occupants experiencing a chilling sensation.

NEW

Flexible Noise Setting

The “Low Noise” mode, which conventionally only had one pattern, has been increased to four patterns so that a mode can be selected from a total of five patterns, including the rated pattern. The low-noise mode has four patterns 85%, 70%, 60% and 50% in respect to the fan speed. This can be set with the outdoor unit’s DIP switch. The pattern can be selected according to the customer’s requests when low-noise operation is required.

PREHEAT DEFROST ON/OFF



*1depending on heating load
During activation of the Preheat defrost, the indoor ambient temperature does not exceed the set□point temperature.

FLEXIBLE NOISE SETTING

Settings function

1) 50%
2) **60%**
3) **70%**
4) **85%**

3 new settings available

5) 100% nominal speed))

Energy efficiency control

Evaporating temperature control (during cooling)

In a traditional system, the evaporation temperature is kept constant regardless of the system load conditions. In low load conditions (when thermal loads to be dealt with are limited) increasing the evaporation temperature of the system decreases the compressor's workload and consequently limits the electrical absorption of the outdoor unit without affecting the environmental comfort level.

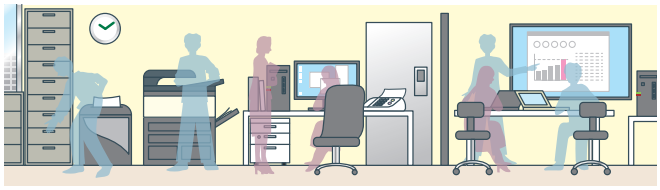
EVAPORATING TEMPERATURE CONTROL (DURING COOLING) NORMAL MODE

The evaporating temperature is kept constant regardless of the load. Even at low loads, the normal evaporating temperature does not change, which leads to energy losses during partial load operation.

SMART EVAPORATING TEMPERATURE CONTROL MODE

The evaporating temperature is increased and the compressor input is decreased according to the load, resulting in increased operating efficiency.
There are two patterns to control the evaporating temperature as follows.
1) The evaporating temperature is controlled to be constant, regardless of the ΔT. The evaporating temperature is set to a value that is higher than the normal evaporating temperature.
2) The evaporating temperature is controlled by shifting it according to the ΔT. The user can select from 4 control patterns.
* The availability of 1 and 2 varies depending on the model. Refer to the function table.
* Changing the evaporating temperature reduces latent heat capacity. Select an appropriate pattern according to the installation conditions.

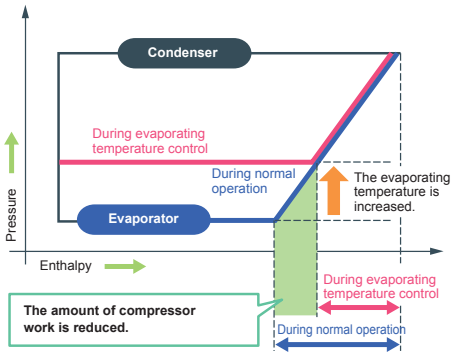
SUITABLE SITUATIONS



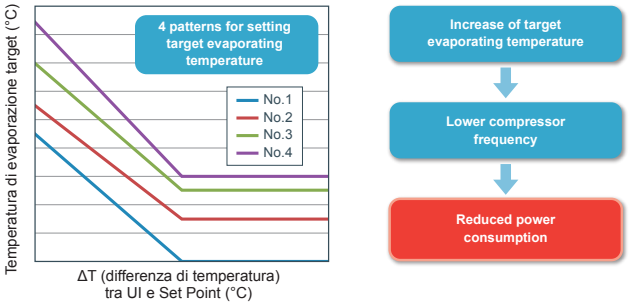
- Spaces with constant high temperatures from heat sources such as OA equipment
- When the load is low during periods when air conditioners are used for cooling (such as during the morning).

The new outdoor units are equipped with an evaporation temperature selection function, which automatically takes the system load conditions into account.

1) EVAPORATING TEMPERATURE CONTROL IMAGE



2) EVAPORATING TEMPERATURE CONTROL IMAGE (WITH 4 PATTERNS)



*1) To change the evaporating temperature setting, it is necessary to change the setting of the dip switch on the outdoor unit.
*2) When the difference between the indoor unit air-intake temperature and the actual temperature setting exceeds 1°C, the evaporating temperature based on this difference is constant. int) è maggiore di 1 C° la temperatura di evaporazione di evaporazione rimane costante.

Compressor: new induction heating technology

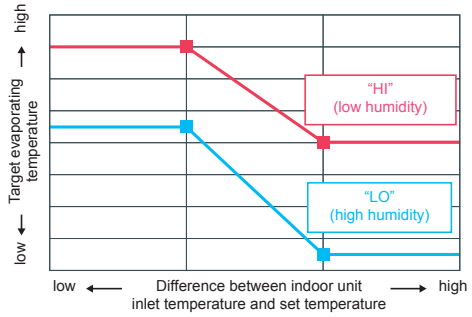
The Y Line and R2 Line outdoor units employ a pre-heating system for the scroll compressor based on induction technology. This solution is used to warm the compressor housing to minimise energy absorption in stand-by state. Yet another solution contributing to reducing energy consumption.

NEW

High sensible heat

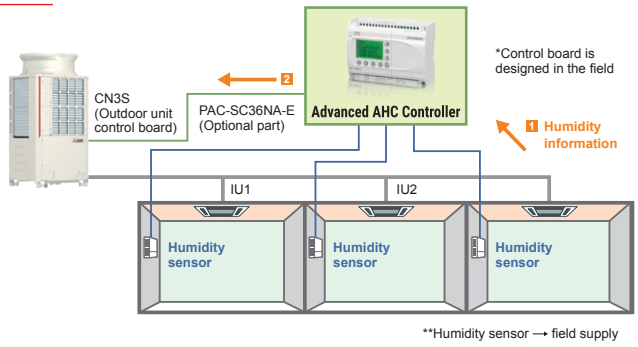
High sensible heat operation

The evaporating temperature is controlled according to room temperature and humidity, and refrigerant pressure.



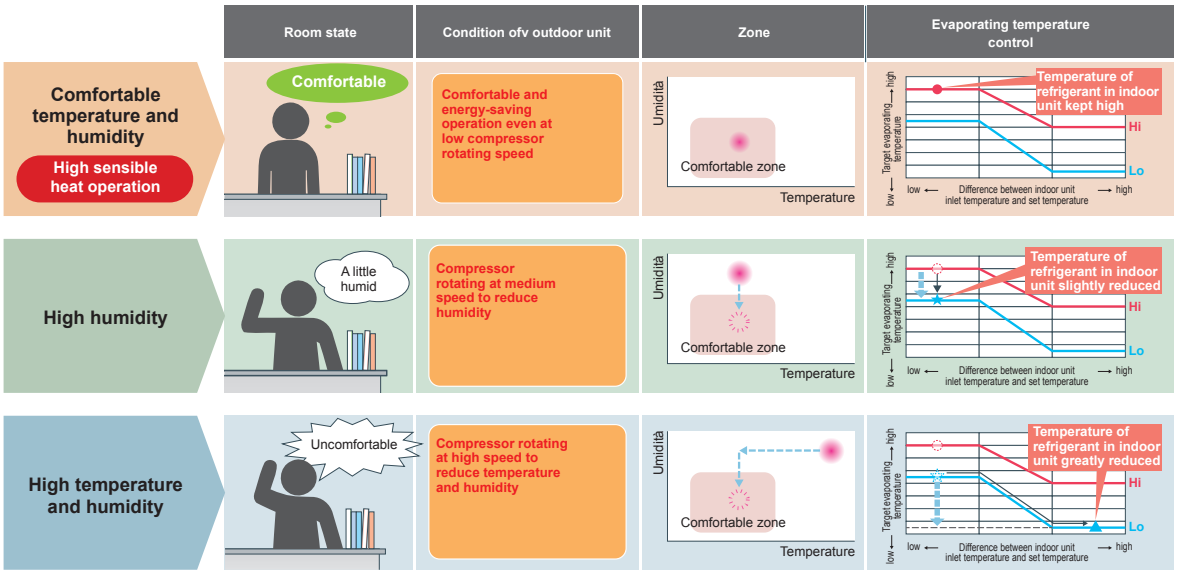
With high sensible heat operation mode activated, air conditioners consume less energy, thereby realizing cost savings. If a locally-procured humidity sensor is installed, the evaporating temperature of the outdoor unit can be controlled optimally as shown below according to the difference between the indoor unit inlet temperature and set temperature. A wide range of temperature settings are available, from a low evaporating temperature close to the temperature for normal operation to a high evaporating temperature to realize energy savings.

LOCALLY-PROCURED HUMIDITY SENSOR INSTALLATION IMAGE



1 Humidity information is sent to the control board.
2 The control board judges the humidity information, and sends a HIGH/LOW signal to the outdoor unit through CN3S. The outdoor unit shifts the evaporating temperature depending on the information from the control board.

TEMPERATURE AND HUMIDITY CONDITIONS

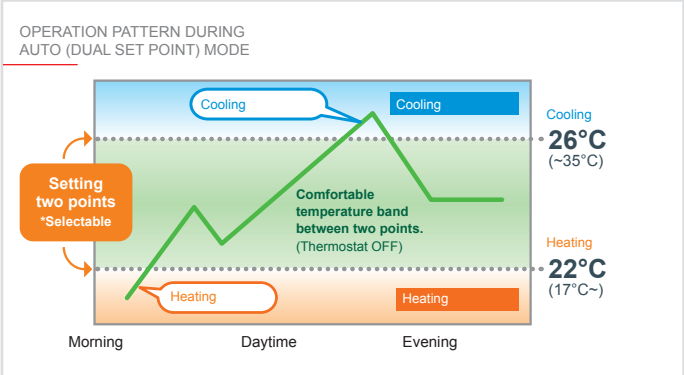


Dual Set Point

Normally, the desired room temperature is set to the same value for cooling and heating. However, the dual set point function makes it possible to set different temperatures for cooling and heating. When operation switches from cooling to heating or vice versa, the preset temperature changes accordingly.

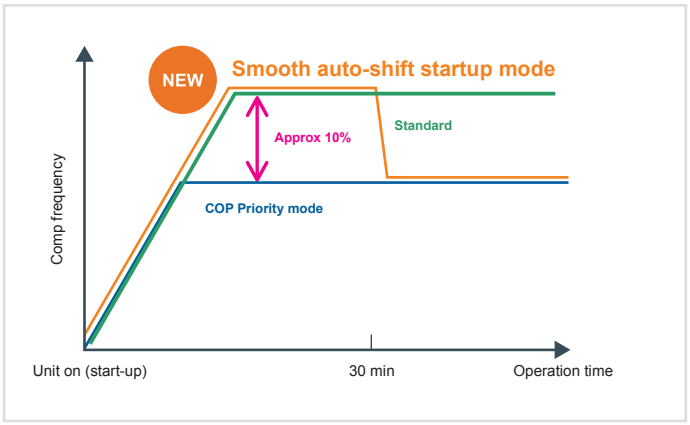
Setting dual set points for the Auto mode on R2 and WR2 helps improve energy efficiency, compared to setting a single set point.

When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, the indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range. The outdoor unit does not operate in the dead band defined by two temperature points where the thermostat is off. This cuts down on unnecessary operation of the air conditioning system.



Smooth auto-shift startup mode

Smooth auto-shift startup mode, a new operation mode on the outdoor unit, can now be selected in addition to the conventional COP Priority and Capacity Priority modes. In order to heat the room faster, Capacity Priority mode runs for 30 minutes when heating operation starts. The unit then switches to COP Priority mode to increase energy-saving efficiency. This enables both improved comfort and energy savings.



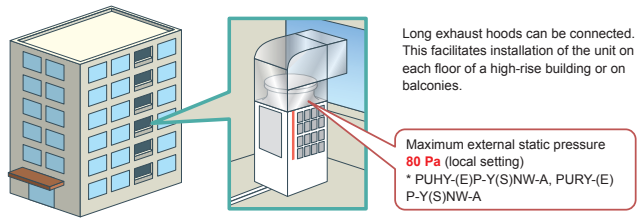
Installation and maintenance

R410A R407C Multi-refrigerant

The indoor units of VRF CITY MULTI systems are the first and only products on the market with multi-refrigerant capability. These units can operate with R22, R407C and R410A systems with no loss in performance, irrespective of the different pipe sizes.This allows unparalleled freedom for installation, as well as offering total reverse compatibility in the event of replacing indoor units with an R22 or R407C VRF CITY MULTI system.

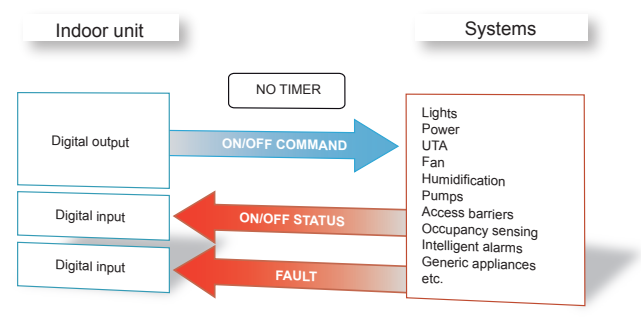
NEW 80Pa Selectable external static pressure of the outdoor unit

The static pressure specification of the outdoor unit can be selected (0, 30, 60, or 80 Pa). This facilitates installation of the unit on each floor of a high-rise building or on balconies.
* The static pressure that can be set varies depending on the model.



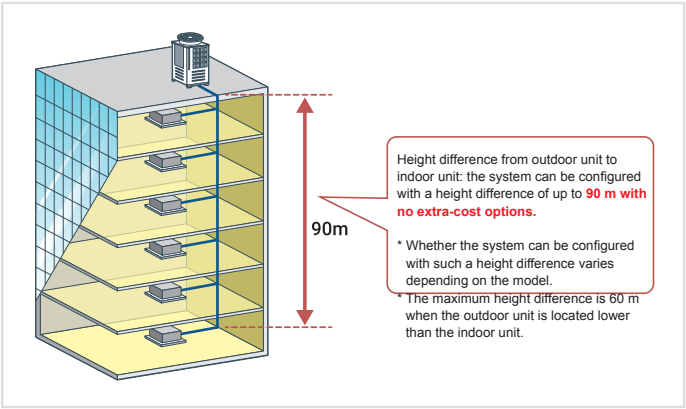
Intelligent Terminal Boards

Intelligent indoor unit terminal boards are a unique feature of Mitsubishi Electric VRF systems.
These intelligent terminal boards make it possible to use the air conditioning system and the M-NET communication network, via the indoor units, as a vehicle for collecting, transferring and monitoring field signals from generic appliances such as lighting, power, access management, intelligent alarm systems etc.
Using the intelligent terminal boards of the indoor units together with the existing infrastructure drastically reduces the number of cables needed to collect these field signals and the amount of labour required to route the cables to the centralized units.
Typically, each indoor unit supports the following signals and functions:



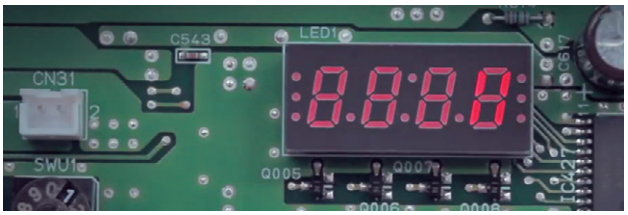
NEW 90m Usable in an application with a large vertical separation of up to 90 meters

A height difference of up to 90 m from the outdoor unit to the indoor unit can be supported with no extra-cost options.
This increases design flexibility and facilitates installation of these units even in high-rise buildings.



Self-diagnosis of VRF CITY MULTI system

For even simpler maintenance, CITY MULTI systems have a self-diagnostic function which is capable of communicating malfunctions on different levels using fault codes. With the special Maintenance Tool software developed by Mitsubishi Electric, the user can connect to any point in the transmission line to acquire all technical operating information interactively.



NEW USB Downloading operating data via USB

Operation data was retrieved from conventional models using the maintenance tool. On the new model, the data can be retrieved
quickly via USB*1. It is unnecessary to carry the personal computer in which the maintenance tool has been installed, reducing field operation time and improving convenience.
Software can be rewritten via USB, while data for up to 4 days and the 5 minutes after an error has occurred can be stored in the the USB memory device*2.

*1 In the case of OC-IC maximum configuration
*2 USB memory devices conforming to USB2.0 can be used.

HVRF System Line

Heat pump systems

HYDRONICVRF

HVRF Hydronic Systems

Heat Pump

HYDRONICVRF

R32

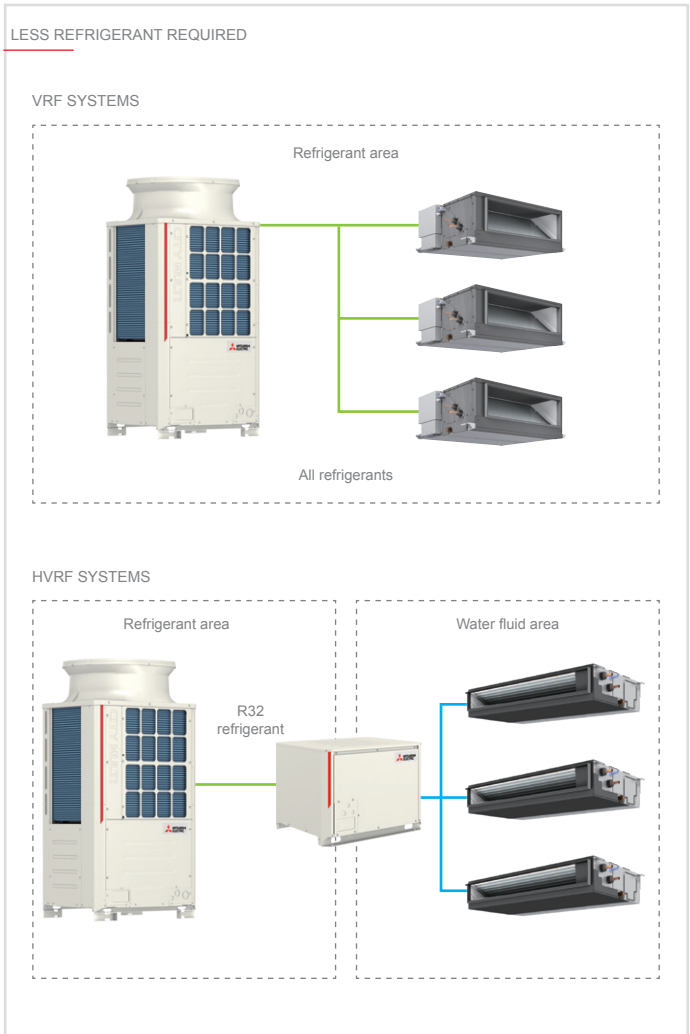
Complete system

HVRF Y systems are based on a modular concept and a complete solution of Mitsubishi Electric branded products.
All system components: Outdoor Units, Hydronic Units, Indoor Units, Control Systems are native to Mitsubishi Electric and communicate with each other through the “M-Net” communication system.
The regulation of HVRF systems is also Mitsubishi Electric unlike traditional Hydronic systems.

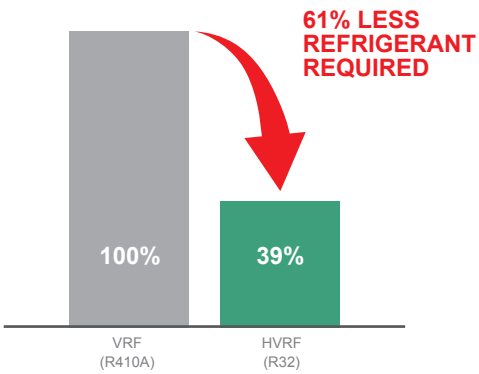
Less refrigerant required

The hydronic unit creates a separation between the area delimited by the refrigerant and the area delimited by the water fluid, limiting the amount of refrigerant that was measured to be around 61%.

LESS REFRIGERANT REQUIRED



LESS REFRIGERANT QUANTITY

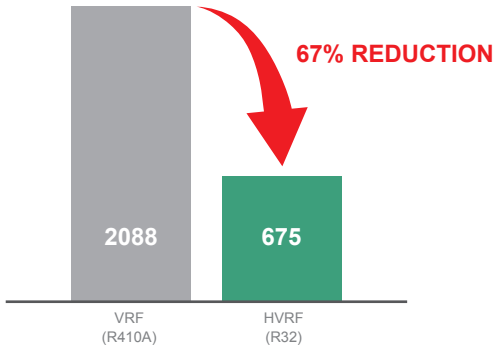


Example carried out with two equivalent VRF and HVRF systems:
Outdoor unit (VRF): 12HP (PUHY-P300YNW-A) x 1, Indoor Units: P20-40 x 19 Outdoor unit (HVRF): 12HP (PUHY-M300YNW-A1) x 1, Indoor Units: W20-40 x 19 Total length of refrigerant piping: 820m (VRF), 60m (HVRF)
Total length from the Outdoor Unit to the Hydronic Unit: 60 m (HVRF) Total length of water pipes: 760m (HVRF)

R32 refrigerant with low environmental impact

Starting from the HVRF Y range, Mitsubishi Electric chooses R32 gas with low GWP (“global warming potential”) 675, approximately 67% less than the 2088 value of R410A gas.
The advantage is in terms of a net reduction in the amount of CO2 equivalent in the environment. Adding the benefits of 61% less refrigerant and 67% less GWP, the reduction amounts to 87% for the CO2 released in the environment.

R32 REFRIGERANT WITH LOW ENVIRONMENTAL



Hydronic unit

HYDRONICVRF

R32

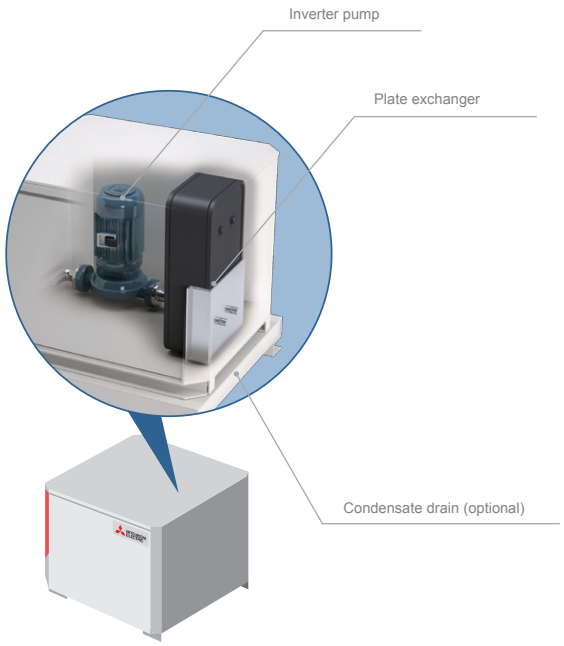
Hydronic unit

The hydronic unit is the fundamental element of the HVRF Y heat pump system, it connects the CITY MULTI outdoor unit to the indoor units via the hydronic system.
The integrated plate exchanger exchanges heat between refrigerant and water.
The integrated pump regulated by an inverter allows the water to reach the indoor units according to the actual cooling and heating needs, allowing efficient operation.
The R32 refrigerant pipes are limited in the section between the Outdoor Unit and the Hydronic Unit, helping to reduce the amount of refrigerant compared to VFR CITY MULTI systems.
The HVRF Y system's hydronic unit can be installed in the building, making the use of antifreeze unnecessary. This reduces energy consumption compared to traditional chillers.

Optimal control

The Hydronic unit automatically calculates the water flow rate required for all indoor units by adapting the flow according to the required load. The pump is controlled with the inverter to determine the amount of water according to the internal load.
The optimal temperature of the supply water is automatically calculated and the corresponding command is communicated to the outdoor unit to define the evaporation and condensation target for the refrigerant gas production.

HYDRONIC UNIT

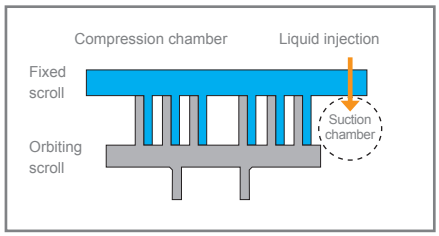


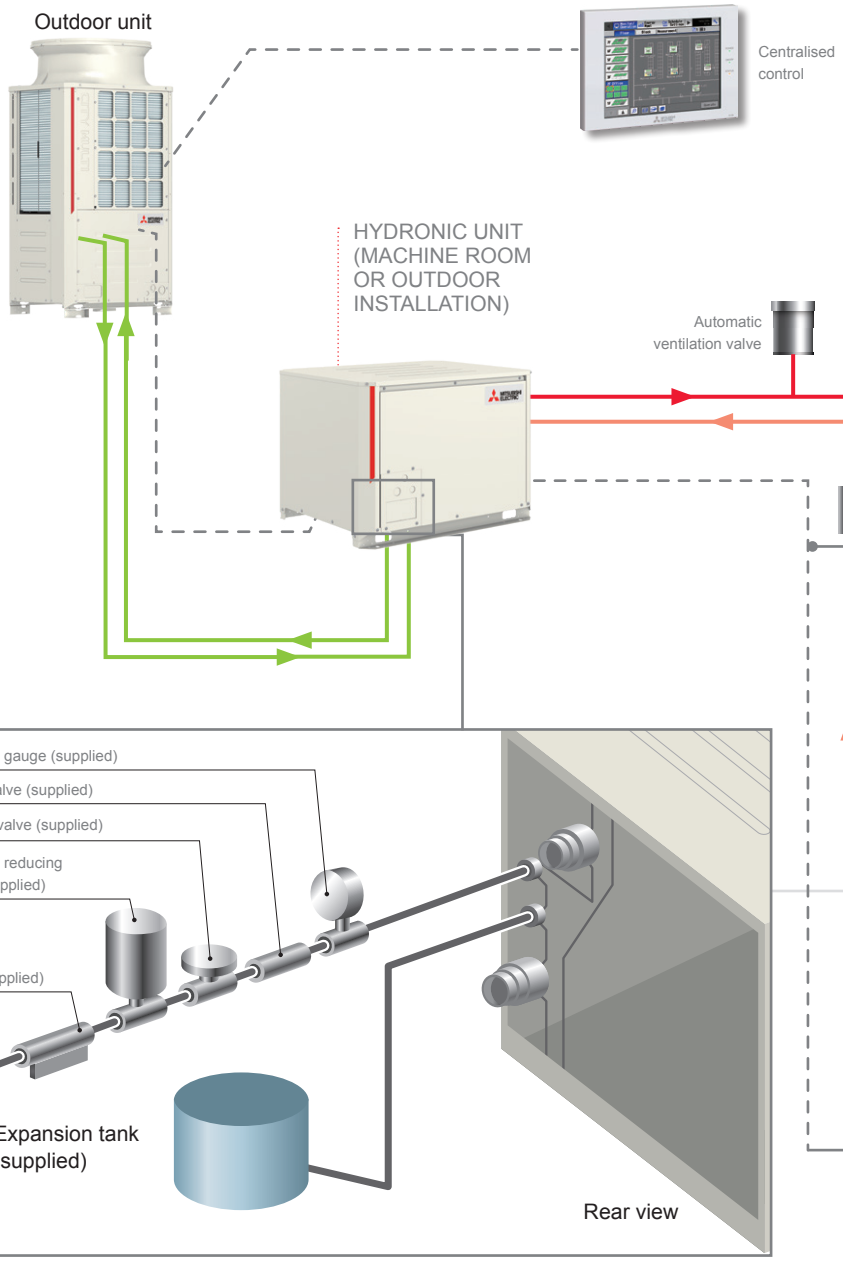
HVRF Y
System architecture

Outdoor unit

Development of the compressor for the adoption of R32 refrigerant

R32 gas has a higher discharge temperature than R410A gas.
To better manage the increase in the discharge temperature, Mitsubishi Electric has redesigned the compressor by equipping it with a liquid injection mechanism in the suction chamber.





*Depending on the installation conditions, it may be necessary to use safety devices.

Refrigerant
Hot water supply
Hot water return
M-NET

Control systems

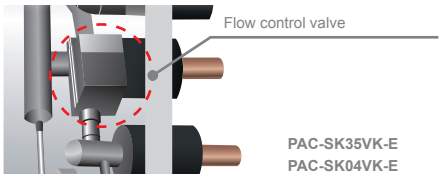
System control through M-NET

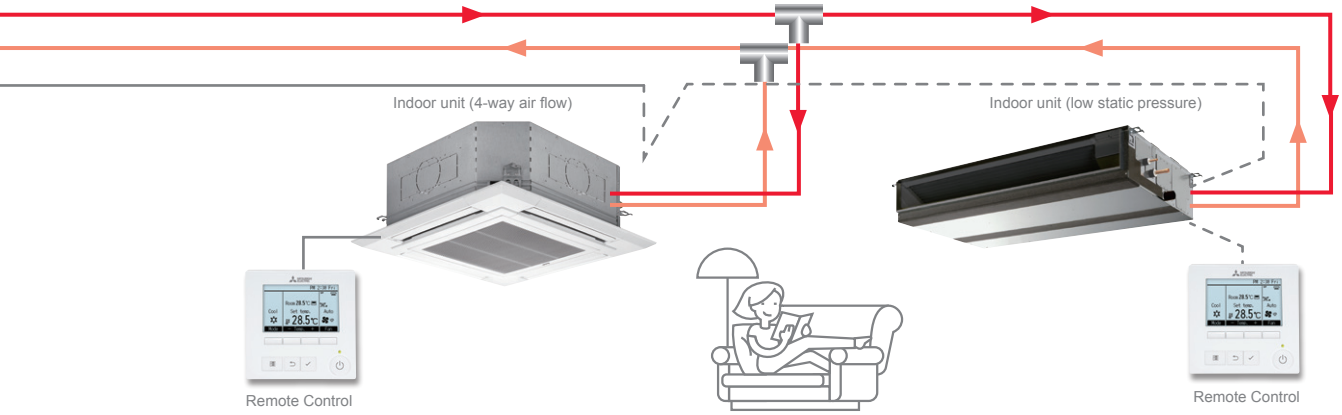
Mitsubishi Electric outdoor unit, indoor units, hydronic unit and individual and centralised control systems communicate through the M-Net communication system for optimal control of the entire system.

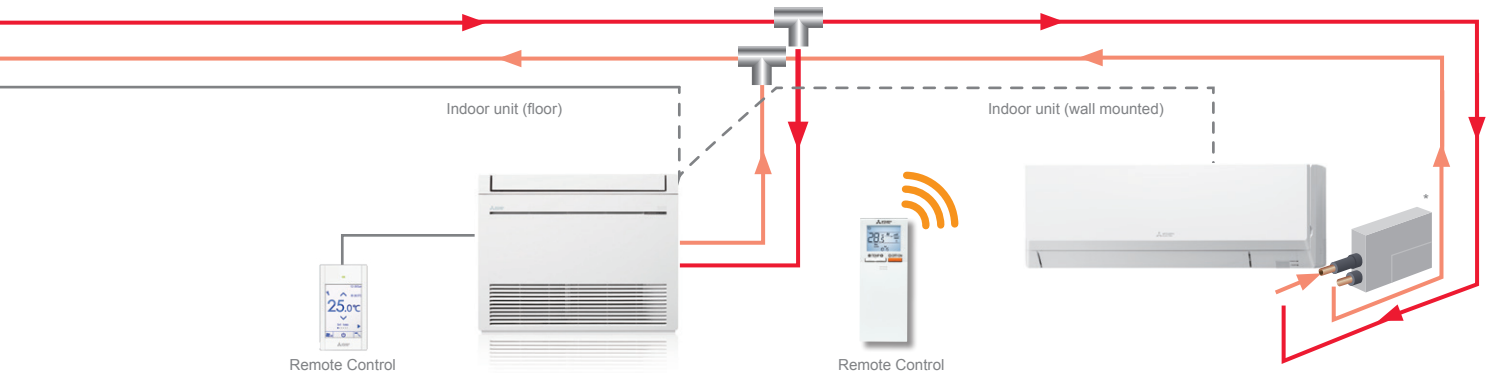
Indoor unit

Optimal control with the flow control valve

HVRF Y system indoor units are fitted with a flow control valve. Based on the internal load of each room, opening the valve automatically allows the correct supply of water to the indoor units serving each room.







Specifications

Y Line

OUTDOOR UNITS - HEAT PUMPS

R32 | ErP 2021 COMPLIANT

Technical specifications

MODEL				PUHY-M200YNW-A1(-BS)	PUHY-M250YNW-A1(-BS)	PUHY-M300YNW-A1(-BS)	PUHY-M350YNW-A1(-BS)
HP				8	10	12	14
Power Supply	Tens./Freq./Phases		V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz			
Cooling	Nominal capacity*1		kW	22,4	28,0	33,5	40
	Power input		kW	5.53	8.38	9.85	12,15
	EER*		kW	4.05	3.34	3.40	3,29
	Temperature operating fields	Indoor BU	°C	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0
		Outdoor BS	°C	-5,0~52,0	-5,0~52,0	-5,0~52,0	-5,0~52,0
Heating	Nominal capacity*2		kW	25.0	31.5	37.5	45
	Power input		kW	5.70	8.18	9.66	12,16
	COP*		kW	4.38	3.85	3.88	3,70
	Temperature operating fields	Indoor BU	°C	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0
		Outdoor BS	°C	-20,0~15,5	-20,0~15,5	-20,0~15,5	-20,0~15,5
Sound pressure*3			dB(A)	58.0 / 59.0 75.0 / 78.0	60.0 / 61.0 78.0 / 80.0	61.0 / 64.5 80.0 / 83.5	62.0 / 64.0 80.5 / 83.0
Connectable int. units.	Model/Quantity			W10~125,WL10~50/1~26	W10~125, WL10~50/1~32	W10~125, WL10~50/2~39	W10~125, WL10~50/2~45
Ø refrigerant pipe	Liquid/Gas		mm	9,52/22,2	9,52/22,2	9,52/22,2	12,7/28,58
External dimensions **	(HxLxD)		mm	1858 x 920 x 740	1858 x 920 x 740	1858 x 920 x 740	1858 x 1240 x 740
Net weight			kg	222	222	223	270
Refr. charge R32/CO_2 Eq			kg/Tons	6,5/4,39	6,5/4,39	6,5/4,39	9,8/6,62

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R32 equal to 675 saccording to regulation 517 / 2014

* The COP and EER coefficients are system performances and as such do not refer just to the outdoor unit but include both the water production coefficients (Outdoor Unit + Hydronic Unit) and the water distribution coefficients (Hydronic Unit + Indoor units).
** Without removable support feet, A = 1798 mm

Technical specifications

MODEL				PUHY-M400YNW-A1(-BS)	PUHY-M450YNW-A1(-BS)	PUHY-M500YNW-A1(-BS)
HP				16	18	20
Power Supply	Tens./Freq./Phases		V/Hz/n°	3-phase 4-wire 380-400-415 V 50/60 Hz		
Cooling	Nominal capacity*1		kW	45	50	56
	Power input		kW	14,65	14,70	17,72
	EER*		kW	3,07	3,40	3,16
	Temperature operating fields	Indoor BU	°C	15,0~24,0	15,0~24,0	15,0~24,0
		Outdoor BS	°C	-5,0~52,0	-5,0~52,0	-5,0~52,0
Heating	Nominal capacity*2		kW	50	56	63
	Power input		kW	13,69	16	17.07
	COP*		kW	3,65	3,50	3,69
	Temperature operating fields	Indoor BU	°C	15,0~27,0	15,0~27,0	15,0~27,0
		Outdoor BS	°C	-20,0~15,5	-20,0~15,5	-20,0~15,5
Sound pressure*3			dB(A)	65.0 /67.0 82.5 / 86.0	65.5 / 69.5 83.5 / 88.5	63.5 / 66.5 82 / 85.5
Connectable int. units.	Model/Quantity			W10~125,WL10~50/2~50	W10~125, WL10~50/2~50	W10~125, WL10~50/2~50
Ø refrigerant pipe	Liquid/Gas		mm	12,7/28,58	15,88/28,58	15,88/28,58
External dimensions **	(HxLxD)		mm	1858 x 1240 x 740	1858 x 1240 x 740	1858 x 1750 x 740
Net weight			kg	273	290	329
Refr. charge R32/CO_2 Eq			kg/Tons	9,8/6,62	10,8/7,29	10,8/7,29

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R32 equal to 675 saccording to regulation 517 / 2014

* The COP and EER coefficients are system performances and as such do not refer just to the outdoor unit but include both the water production coefficients (Outdoor Unit + Hydronic Unit) and the water distribution coefficients (Hydronic Unit + Indoor units).
** Without removable support feet, A = 1798 mm

Hydronic unit

R32

Technical specifications

MODEL			CMH-WM250V-A		CMH-WM350V-A		CMH-WM500V-A	
Power source	Phases/ Tens.		1-phase 220-230-240 V					
	Frequence		50 Hz					
Power input	Cooling	kW	0.74		0.90		1.06	
	Heating	kW	0.74		0.90		1.06	
Sound pressure level (measured in anechoice room)		dB <A>	60		60		60	
Applicable temperature range of installation site		°C (D.B.)	-5~52		-5~52		-5~52	
Connectable outdoor/heat source unit capacity			M200~250		M300~350		M400~500	
External dimension	HxWxD	mm	660 x 920 x 740		660 x 920 x 740		660 x 920 x 740	
Refrigerant piping diameter	To outdoor/ heat source unit		Connectable outdoor/heat source unit capacity		Connectable outdoor/heat source unit capacity		Connectable outdoor/heat source unit capacity	
			M200	M250	M300	M350	M400	M450/500
	Liquid pipe	mm O.D.	9.52	9.52	9.52	12.7	12.7	15.88
	Gas pipe	mm O.D.	22.2	22.2	22.2	28.58	28.58	28.58
Water piping diameter	To Indoor unit							
	Inlet Pipe	mm I.D.	40 (1-1/2) housing joint		40 (1-1/2) housing joint		50 (2) housing joint	
	Outlet Pipe	mm I.D.	40 (1-1/2) housing joint		40 (1-1/2) housing joint		50 (2) housing joint	
Net weight		kg	112		117		143	

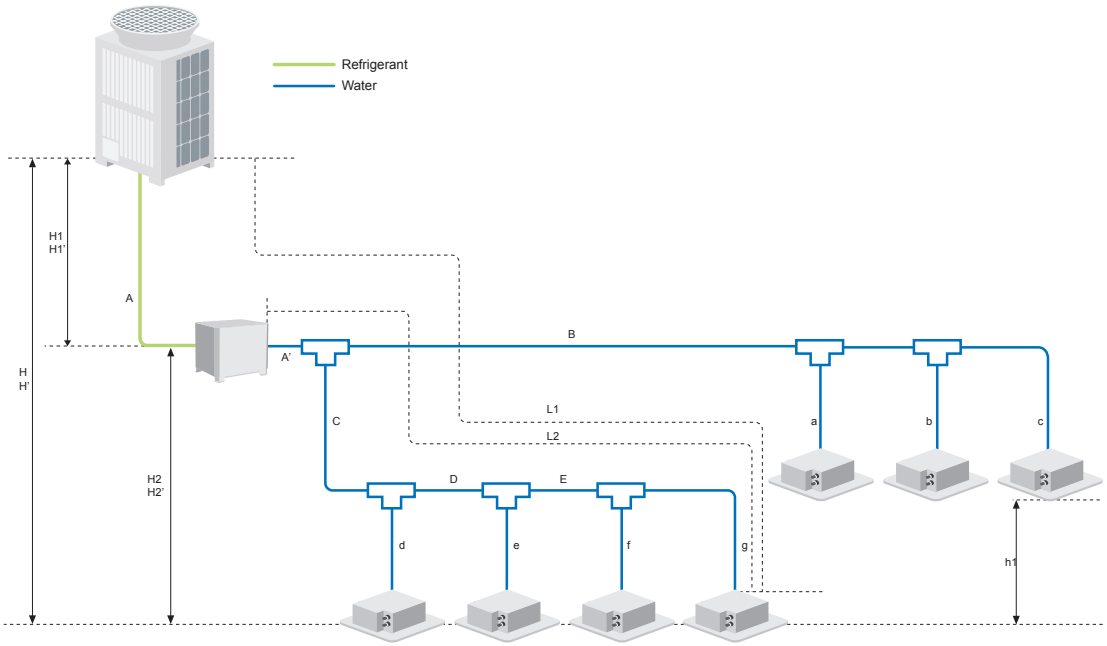
*The equipment is for R32 refrigerant.
*Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors.
(For use in quiet environments with low background noise, position the Hydro unit at least 5 m away from any indoor units.)
*Please install the Hydro unit in a place where noise will not be an issue.
*Please attach an expansion vessel (field supply).
*Use copper, plastic, steel, or stainless steel pipes for the water circuit.
Furthermore, when using copper pipe-work use a non-oxidative brazing method.
Oxidation of the pipe-work will reduce the pump life.
*When blazing the pipes, be sure to blaze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
*Please install an air purge valve where air will gather in the water circuit.
*Please install a pressure reducing valve and a strainer on the water supply to the Hydro unit.
*Please refer to the databook or the installation manual for the specified water quality.
*Please always make water circulate or pull out the circulation water complentely when not using it.
(Please do not use it as a drinking water.)
*Please do not use ground water and well water.
*When installing the Hydro unit in an environment which may drop below 0 °C, please add antifreeze to the circulating water.(Refer to the data-book and the installation manual).
*R32 is flammable, and certain restrictions apply to the installation of units.
When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed.
For detail, refer to the section in the Databook on installation restrictions.
*Drain or condensation water will be discharged from hydro units during test run.
If this will be a problem, install a separately sold drain pan.
*Do not install the unit where it could be salt-damaged.

Design guide

HVRF Hydronic Heat Pump Systems

Item	Circuit section	Maximum length (m)
Effective length between outdoor unit and hydronic unit		
(Refrigerant piping)	A	110
Effective length between Outdoor Unit and furthest indoor unit (L1)	A+A'+C+D+E+g/A+B+c	165
Effective length between Hydronic Unit and furthest indoor unit (L2)	A'+C+D+E+g/A'+B+c	60
Difference in height between outdoor unit and indoor unit		
(Outdoor unit above/below the indoor unit)	H/H'	90/60
Difference in height between outdoor unit and hydronic unit		
(Outdoor unit above/below the hydronic unit)	H1/H1'	50[1] / 40[2]
Difference in height between hydronic unit and indoor unit		
(Hydronic unit above/below the indoor unit	H2/ H2'	50/40
Difference in height between indoor units	h1	30

*[1] 90 m is available depending on the model and installation conditions. For more detailed information, please contact your local distributor.
*[2] 60 m is available depending on the model and installation conditions. For more detailed information, please contact your local distributor.



HVRF Systems Line

Heat recovery systems

HVRF R2/WR2 systems

Hydronic Branch Controller (HBC)

HVRF R2/WR2 System architecture

System Components

Design guide

HYDRONICVRF

HVRF R2/WR2 systems

Heat Recovery

HYDRONICVRF

R410A

Hydronic CITY MULTI

Hydronic CITY MULTI is the first and only system in the world derived from the R2 system to guarantee a high degree of air comfort with the advantages of direct expansion with variable refrigerant flow.

Why Hydronic VRF

Hydronic CITY MULTI is a heat recovery system (simultaneous heating and cooling) which becomes part of the CITY MULTI family and which adopts water for the first time to distribute the heating and cooling power in the room.

Hydronic BC Distributor

Simultaneous cooling/heating with heat recovery.
The new Hydronic CITY MULTI is the first and only two-pipe system in the world for simultaneous cooling and heating with heat recovery that combines the advantages of the direct expansion system with those of the traditional hydronic system. The technology is based on Mitsubishi Electric's CITY MULTI R2 heat recovery system and consists of an R2 (or WR2) outdoor unit of the CITY MULTI series, the innovative Hydronic BC (HBC) distributor which allows the use of refrigerant gas and water as heat carrier fluids, as well as indoor units specially equipped with a.water coil.

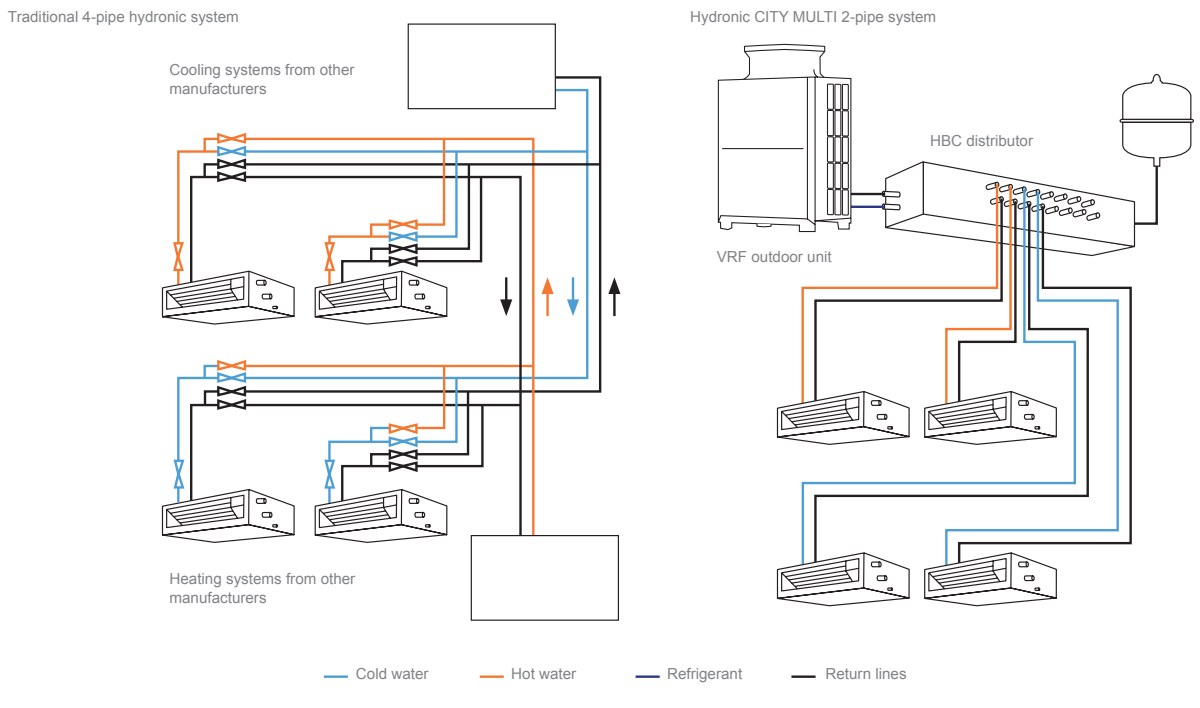
Lower concentration of R410 GAS

The use of hydronic distribution allows the limits linked to the stringent legislation
(UNI EN 378) on the concentration of refrigerant gases to be overcome: this is possible thanks to the fact that the only portion of the system that contains refrigerant gas is the one that connects the outdoor unit to the Hydronic BC Controller distributor. In this way it is possible to obtain up to 45% reduction of the refrigerant charge compared to a traditional VRF system.

2-Pipe systems

Compared to a traditional 4-pipe hydronic system, the design and installation of the 2-pipe system is very flexible and simplified.
For example, the Hydronic CITY MULTI system does not need additional pumps, tanks or switching valves. The significantly smaller number of connection points in the two-pipe system limits its potential for leakage, makes it safer and reduces the need for maintenance.

COMPARISON OF THE CONNECTION POINTS TO BE MADE IN THE SYSTEM



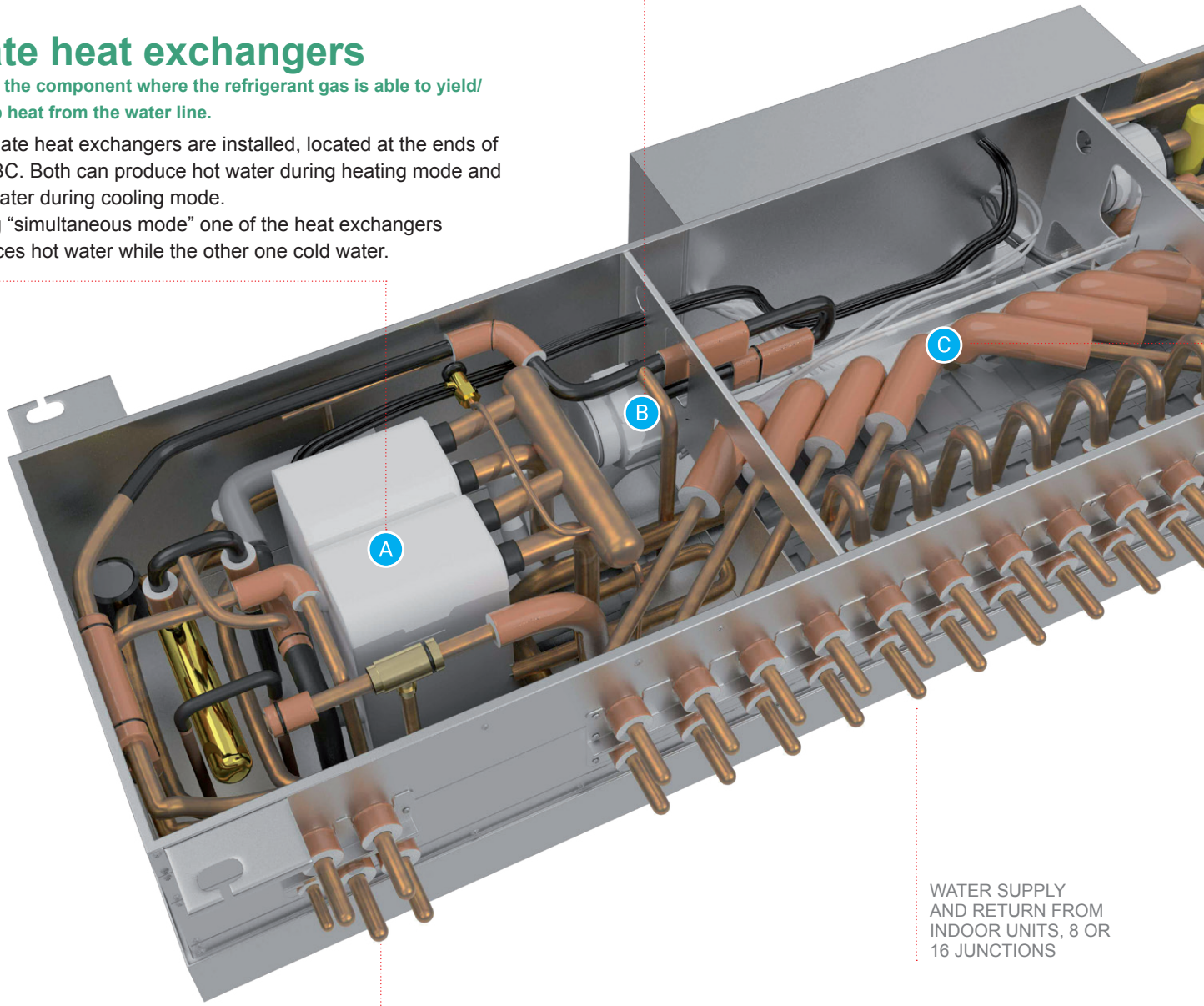
Hydronic Branch Controller (HBC)

The heart of Hybrid VRF

Plate heat exchangers

This is the component where the refrigerant gas is able to yield/ absorb heat from the water line.

Two plate heat exchangers are installed, located at the ends of the HBC. Both can produce hot water during heating mode and cold water during cooling mode.
During “simultaneous mode” one of the heat exchangers produces hot water while the other one cold water.



WATER SUPPLY AND RETURN FROM INDOOR UNITS, 8 OR 16 JUNCTIONS

REFRIGERANT PIPES TO OUTDOOR UNIT, EXPANTION VESSEL (FIELD SUPPLIED) AND WATER FEEDING LINE (FIELD SUPPLIED)

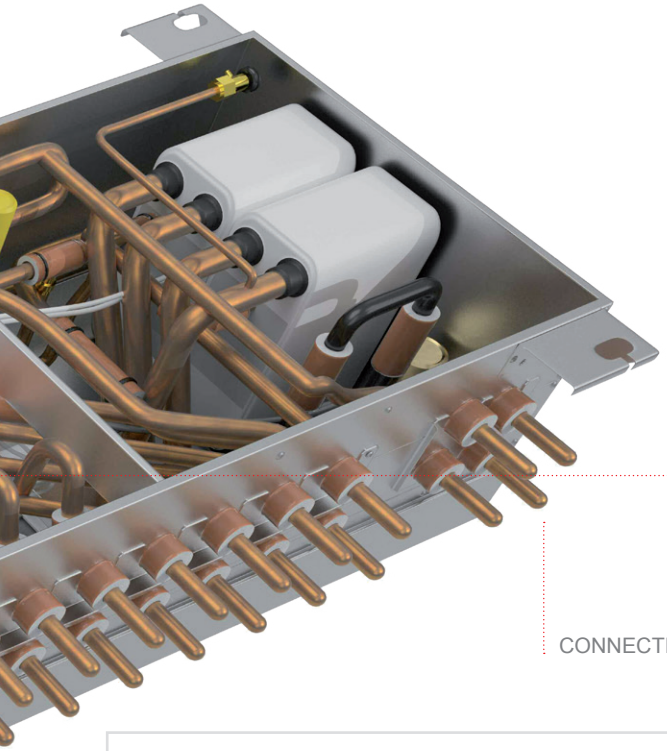
HYDRONICVRF

R410A

Pumps

Both plate heat exchangers are equipped with inverter DC pumps.

The pumps allow circulation of water between HBC and the indoor units. The flow rate is controlled by a valves block.



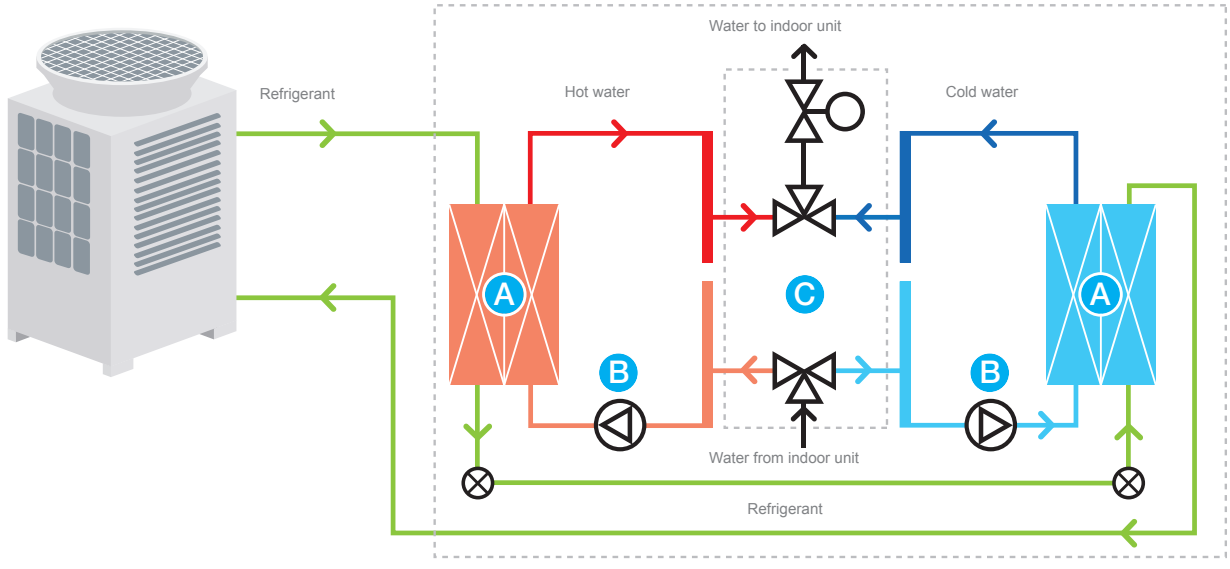
Valves Block

A set of valves is connected to supply and return pipes of each indoor unit.

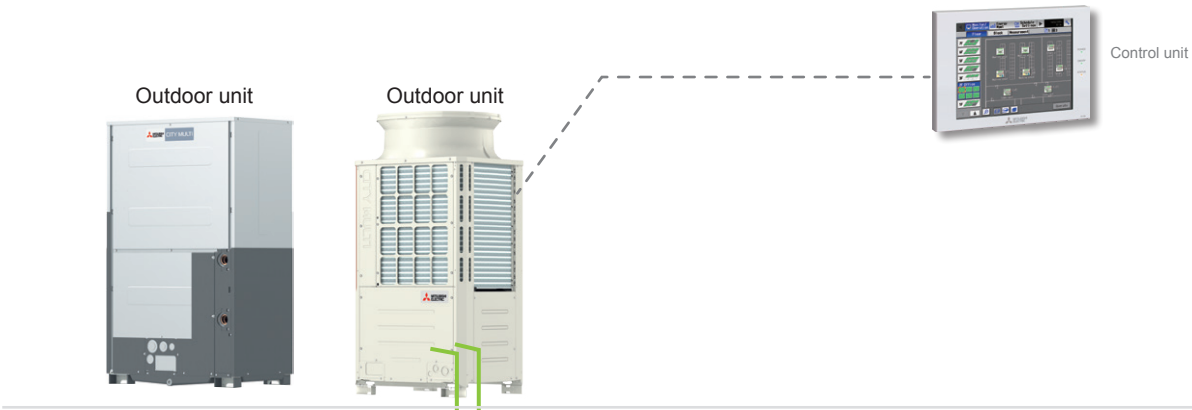
This valves block has two tasks: firstly it selects the hot or cold water header and then it regulates the flow fed to the indoor units based on the thermal power required.

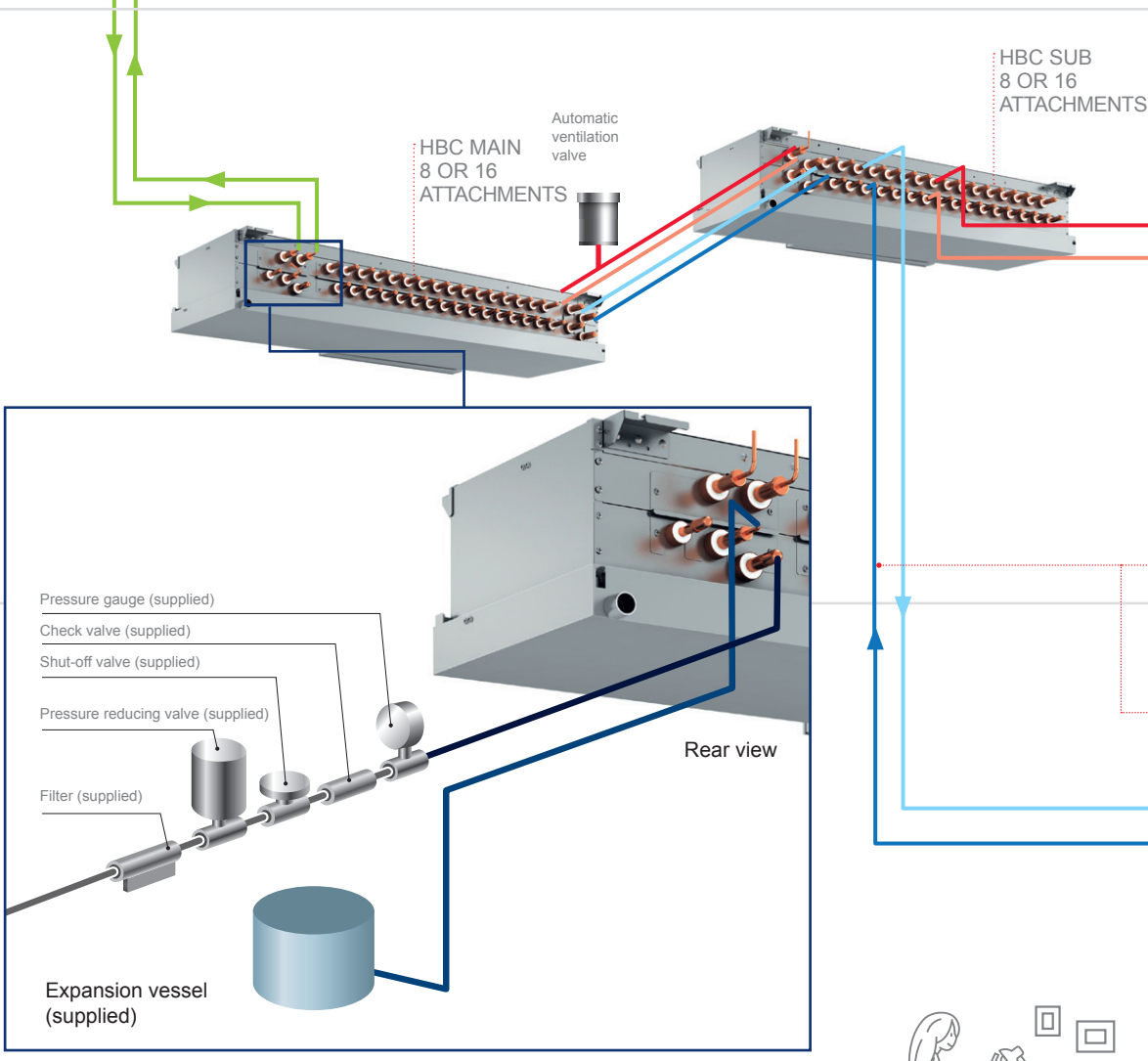
CONNECTION TO SUB HBC

HBC SIMULTANEOUS HEATING/COOLING MODE



HVRF R2/WR2
System architecture

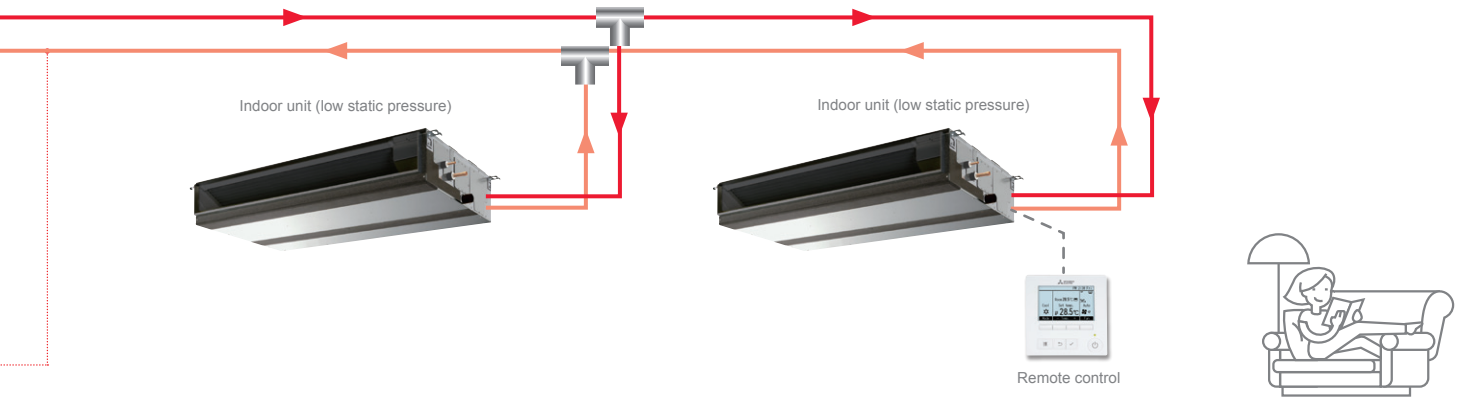




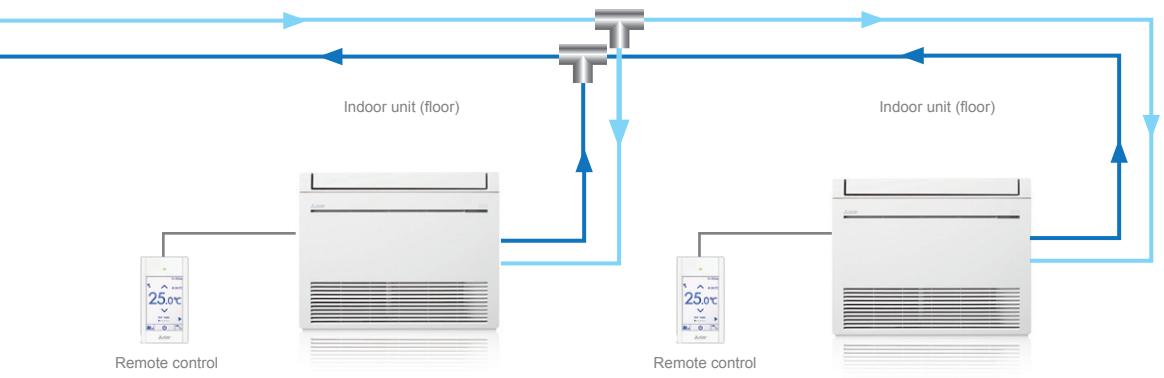
Refrigerant
Hot water supply
Hot water return
Cold water supply
Cold water return

PURY/PQRY Outdoor unit	FIRST HBC MAIN	FIRST HBC SUB	SECOND HBC MAIN	SECOND HBC SUB
P200	•	•*	X	X
P250	•	•*	X	X
P300	•	•*	•*	•*
P350	•	•*	•*	•*
P400	•	•*	•	•*
P450	•	•*	•	•*
P500	•	•*	•	•*

* Optional



The water pipes (20 mm) provide heating and cooling simultaneously



Specifications

R2 Line

HEAT RECOVERY OUTDOOR UNIT

R410A | ErP 2021 COMPLIANT | EUROVENT CERTIFIED PERFORMANCE

Technical specifications

MODEL				PURY-P200YNW-A1 (-BS)	PURY-P250YNW-A1(-BS)	PURY-P300YNW-A1 (-BS)	PURY-P300YNW-A1 (-BS) X2 HBC
HP				8	10	12	12
Power Supply	Tens./Freq./Phases		V/Hz/n°	3 fasi 380-400-415V 50Hz			
Cooling	Nominal capacity*1		kW	22,4	28,0	33,5	33,5
	Power input		kW	6,54	9,92	13,13	11,12
	EER*		kW	3,42	2,82	2,55	3,01
	Temperature operating fields	Indoor BU	°C	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0
		Outdoor BS	°C	-5,0~52,0	-5,0~52,0	-5,0~52,0	-5,0~52,0
Heating	Nominal capacity*2		kW	25,0	31,5	37,5	37,5
	Power input		kW	6,49	10,06	12,71	11,94
	COP*		kW	3,85	3,13	2,95	3,14
	Temperature operating fields	Indoor BU	°C	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0
		Outdoor BS	°C	-20,0~15,5	-20,0~15,5	-20,0~15,5	-20,0~15,5
Sound pressure*3			dB(A)	59,0/59,0 (76/78)	60,5/61,0 (78/80)	61,0/67,0 (80/86)	61,0/67,0(80/86)
Connectable int. units.	Model/Quantity			1~30	1~37	2~45	2~45
Ø refrigerant pipe	Liquid/Gas		mm	15,88/19,05	19,05/22,2	19,05/22,2	19,05/22,2
External dimensions **	(HxLxD)		mm	1858 x 920 x 740	1858 x 920 x 740	1858 x 920 x 740	1858 x 920 x 740
Net weight			kg	214	223	225	225
Refr. charge R410A/CO_2 Eq			kg/Tons	5,2/10,86	5,2/10,86	5,2/10,86	5,2/10,86

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

* The COP and EER coefficients are system performances and as such do not refer just to the outdoor unit but include both the water production coefficients (Outdoor Unit + Hydronic Unit) and the water distribution coefficients (Hydronic Unit + Indoor units).
** Without removable support feet, A = 1798 mm

Technical specifications

MODEL				PURY-P350YNW-A1 (-BS)	PURY-P350YNW-A1 (-BS) X2 HBC	PURY-P400YNW-A1 (-BS)	PURY-P450YNW-A1 (-BS)	PURY-P500YNW-A1 (-BS)
HP				14	14	16	18	20
Power Supply	Tens./Freq./Phases		V/Hz/n°			3 fasi 380-400-415V 50Hz		
Cooling	Nominal capacity*1		kW	40,0	40,0	45	50,0	56,0
	Power input		kW	16,26	13,24	16,65	17,92	24,03
	EER*		kW	2,46	3,02	2,70	2,79	2,33
	Temperature operating fields	Indoor BU	°C	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0
		Outdoor BS	°C	-5,0~52,0	-5,0~52,0	-5,0~52,0	-5,0~52,0	-5,0~52,0
Heating	Nominal capacity*2		kW	45,0	45,0	50	56,0	63,0
	Power input		kW	13,88	12,85	14,88	17,39	19,09
	COP*		kW	3,24	3,50	3,36	3,22	3,30
	Temperature operating fields	Indoor BU	°C	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0
		Outdoor BS	°C	-20,0~15,5	-20,0~15,5	-20,0~15,5	-20,0~15,5	-20,0~15,5
Sound pressure*3			dB(A)	62,5/64,0(81/83)	62,5/64,0(81/83)	65,0/69,0 (83/88)	65,5/70,0 (83/89)	63,5/64,5(82/84)
Connectable int. units.	Model/Quantity			2~50	2~50	2~50	2~50	2~50
Ø refrigerant pipe	Liquid/Gas		mm	19,05/28,58	19,05/28,58	22,2/28,58	22,2/28,58	22,2/28,58
External dimensions **	(HxLxD)		mm	1858 x 1240 x 740	1858 x 1240 x 740	1858 x 1240 x 740	1858 x 1240 x 740	1858 x 1750 x 740
Net weight			kg	269	269	269	289	335
Refr. charge R410A/CO_2 Eq			kg/Tons	8/16,70	8/16,70	8/16,70	10,8/22,55	10,8/22,55

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

* The COP and EER coefficients are system performances and as such do not refer just to the outdoor unit but include both the water production coefficients (Outdoor Unit + Hydronic Unit) and the water distribution coefficients (Hydronic Unit + Indoor units).
** Without removable support feet, A = 1798 mm

WR2 Line

WATER CONDENSED HEAT RECOVERY OUTDOOR UNIT

R410A | ErP 2021 COMPLIANT | EUROVENT CERTIFIED PERFORMANCE

Technical specifications

MODEL				PQRY-P200YLM-A1	PQRY-P250YLM-A1	PQRY-P300YLM-A1	PQRY-P300YLM-A1 X2 HBC
HP				8	10	12	12
Power Supply	Tens/Freq./Phases		V/Hz/n°	3 phase 380-400-415V 50Hz			
Cooling	Nominal capacity*1		kW	22,4	28,0	33,5	33,5
	Power input		kW	3,97	5,44	7,55	6,71
	EER*		kW	5,64	5,14	4,43	4,99
	Temperature operating fields	Indoor BU	°C	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0
		Outdoor BS	°C	10,0~45,0	10,0~45,0	10,0~45,0	10,0~45,0
Heating	Nominal capacity*2		kW	25,0	31,5	37,5	37,5
	Power input		kW	4,04	5,41	7,13	6,79
	COP*		kW	6,18	5,82	5,25	5,52
	Temperature operating fields	Indoor BS	°C	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0
		Outdoor BU	°C	10,0~45,0	10,0~45,0	10,0~45,0	10,0~45,0
Sound pressure*3			dB(A)	46 (60)	48 (62)	54(68)	54(68)
Connectable int. units.				50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity
	Connectable int. units			1~30	1~37	3~45	2~45
Ø refrigerant pipe	Liquid/Gas		mm	15,88/19,05	19,05/22,2	19,05/22,2	19,05/22,2
Water circuit	Norm flow rate		m^3/h	5,76	5,76	5,76	5,76
	Water flow rate range		m^3/h	3,0-7,2	3,0-7,2	3,0-7,2	3,0-7,2
	Pressure drop		kPa	24	24	24	24
	Heat exch. volume		l	5	5	5	5
External dimensions (HxLxD)			mm	1100 x 880 x 550	1100 x 880 x 550	1100 x 880 x 550	1100 x 880 x 550
Net weight			kg	173	173	172	173
Refr. charge R410A*2/CO_2 Eq			kg/Tons	5/10,44	5/10,44	5/10,44	5/10,44

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

* The COP and EER coefficients are system performances and as such do not refer just to the outdoor unit but include both the water production coefficients (Outdoor Unit + Hydronic Unit) and the water distribution coefficients (Hydronic Unit + Indoor units).

** Without removable support feet, A = 1798 mm

Technical specifications

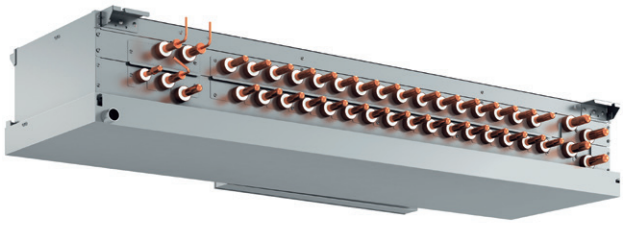
MODEL				PQRY-P350YLM-A1	PQRY-P350YLM-A1 X2 HBC	PQRY-P400YLM-A1	PQRY-P450YLM-A1	PQRY-P500YLM-A1
HP				14	14	16	18	20
Power Supply	Tens/Freq./Phases		V/Hz/n°	3 fasi 380-400-415V 50Hz				
Cooling	Nominal capacity*1		kW	40,0	40,0	45,0	50,0	56,0
	Power input		kW	9,98	8,72	10,05	12,05	14,58
	EER*		kW	4,00	4,58	4,47	4,14	3,84
	Temperature operating fields	Indoor BU	°C	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0	15,0~24,0
		Outdoor BS	°C	10,0~45,0	10,0~45,0	10,0~45,0	10,0~45,0	10,0~45,0
Heating	Nominal capacity*2		kW	45,0	45,0	50,0	56,0	63,0
	Power input		kW	8,87	8,25	9,45	11,11	13,07
	COP*		kW	5,07	5,45	5,29	5,04	4,82
	Temperature operating fields	Indoor BS	°C	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0	15,0~27,0
		Outdoor BU	°C	10,0~45,0	10,0~45,0	10,0~45,0	10,0~45,0	10,0~45,0
Sound pressure*3			dB(A)	52(66)	52(66)	52(66)	54(70)	54(70,5)
Connectable int. units.				50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity
	Connectable int. units			2~50	2~50	2~50	2~50	5~50
Ø refrigerant pipe	Liquid/Gas		mm	22,2/28,58	22,2/28,58	22,2/28,58	22,2/28,58	22,2/28,58
Water circuit	Norm flow rate		m^3/h	7,20	7,20	7,20	7,20	7,20
	Water flow rate range		m^3/h	4,5-11,6	4,5-11,6	4,5-11,6	4,5-11,6	4,5-11,6
	Pressure drop		kPa	44	44	44	44	44
	Heat exch. volume		l	5	5	5	5	5
External dimensions (HxLxD)			mm	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550
Net weight			kg	217	217	217	217	217
Refr. charge R410A*4/CO_2 Eq			kg/Tons	6/12,53	6/12,53	6/12,53	6/12,53	6/12,53

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

* The COP and EER coefficients are system performances and as such do not refer just to the outdoor unit but include both the water production coefficients (Outdoor Unit + Hydronic Unit) and the water distribution coefficients (Hydronic Unit + Indoor units).

** Without removable support feet, A = 1798 mm

Main HBC Controller



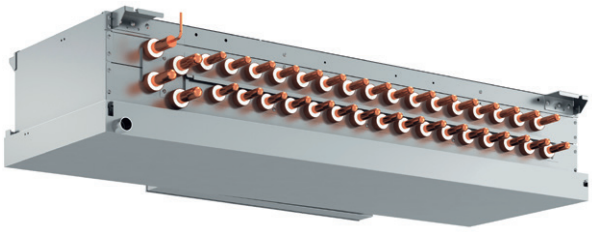
R410A

Technical specifications

MODEL			CMB-WM108V-AA	CMB-WM1016V-AA
Number of branches			8 (22mm OD pipe)	16 (22mm OD pipe)
Net weight		kg	86	98
Weight with water		kg	96	111
Dimensions	Width	mm	1520	1800
	Depth	mm	630	630
	Height	mm	300	300
Power supply			220-240V, 50Hz	220-240V, 50Hz
Phase			1	1
Power input		kW	0.46	0.46
Current		A	2.83	2.83

CMB-WM-V-AA e CMB-WM-V-AB units are to be used exclusively with outdoor units PURY-P200-500YNW-A(1), PQRY-P200-500YLM-A1 and HVRF indoor units (W/WL/WP)
One HBC Main can be used with PURY-P200-350YNW-A(1), PQRY-P200-350YLM-A1.
Two HBC Main can be used with PURY-P300-350YNW-A(1), PQRY-P300-350YLM-A1.
Two HBC Main must be used withPURY-P400-500YNW-A(1), PQRY-P400-500YLM-A1.

Sub HBC Controller



R410A

Technical specifications

MODEL			CMB-WM108V-AB	CMB-WM1016V-AB
Number of branches			8 (22mm OD pipe)	16 (22mm OD pipe)
Net weight		kg	44	53
Weight with water		kg	49	62
Dimensions	Width	mm	1520	1520
	Depth	mm	630	630
	Height	mm	300	300
Power supply			220-240V 50Hz	220-240V, 50Hz
Phase			1	1
Power input		kW	0.01	0.01
Current		A	0.05	0.05

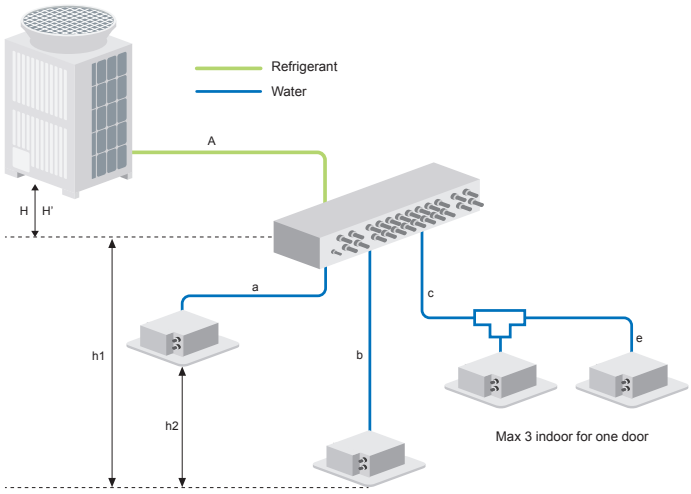
CMB-WM-V-AA e CMB-WM-V-AB units are to be used exclusively with outdoor units PURY-P200-500YNW-A(1), PQRY-P200-500YLM-A1 and HVRF indoor units (W/WL/WP)
One HBC Main can be used with PURY-P200-350YNW-A(1), PQRY-P200-350YLM-A1.
Two HBC Main can be used with PURY-P300-350YNW-A(1), PQRY-P300-350YLM-A1.
Two HBC Main must be used withPURY-P400-500YNW-A(1), PQRY-P400-500YLM-A1.

Design guide

HVRF Hydronic Heat Recovery systems

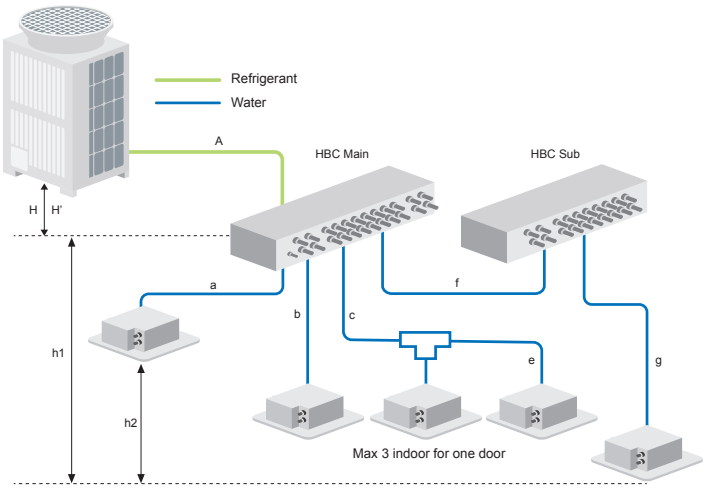
1 HBC Main

Item	Circuit section	Maximum length (m)
Effective length between outdoor unit and HBC Main distributor	A	110
Effective length between HBC distributor and indoor unit	b	60
Height difference between OU and HBC Main (OU above HBC Main)	H	50
Height difference between OU and HBC Main (OU below HBC Main)	H'	40
Difference in height between Indoor unit and HBC distributor	h1	15
Difference in height between indoor units	h2	15



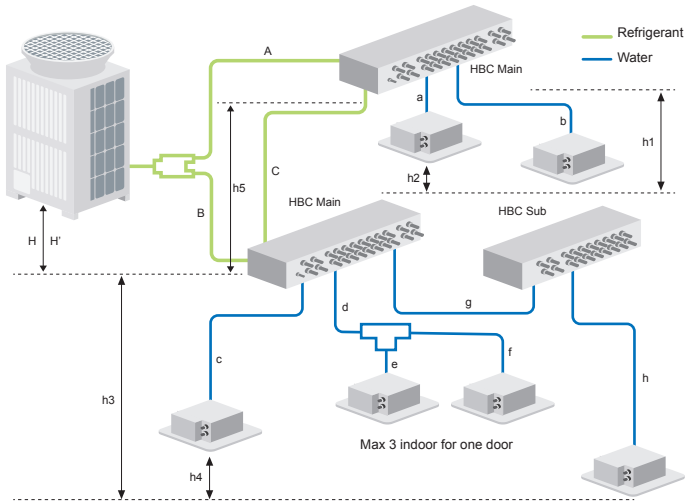
1 HBC Main e 1 HBC Sub

Item	Circuit section	Maximum length (m)
Effective length between outdoor unit and HBC Main distributor	A	110
Effective length between HBC distributor and indoor unit	f+g	60
Height difference between OU and HBC Main (OU above HBC Main)	H	50
Height difference between OU and HBC Main (OU below HBC Main)	H'	40
Difference in height between indoor unit and HBC distributor	h1	15
Difference in height between indoor units	h2	15



2 HBC Main e 1 HBC Sub

Item	Circuit section	Maximum length (m)
Effective length between outdoor unit and HBC Main distributor	A+B	110
Effective length between HBC distributor and indoor unit	b e (g + h)	60
Height difference between OU and HBC Main (OU above HBC Main)	H	50
Height difference between OU and HBC Main (OU below HBC Main)	H'	40
Difference in height between indoor unit and HBC distributor	h1	15
Difference in height between indoor units	h2	15
Difference in height between HBC Main and HBC Main	h3	15
Length between HBC Main and HBC Main	C	40



HVRF Systems Line

Indoor units

Ceiling concealed indoor units

Ceiling cassette indoor units

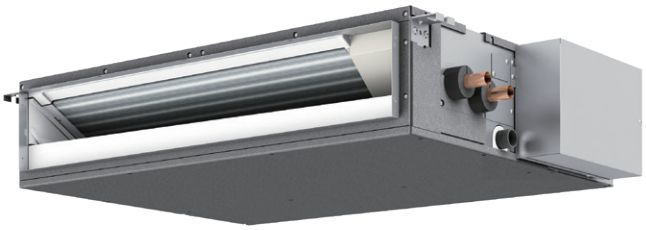
Floor standing indoor units

Wall mounted indoor units

HYDRONICVRF

PEFY-W VMS-A

INDOOR UNITS - Ceiling concealed medium to low static pressure



VALVE **INCLUDED**

Technical specifications

MODEL			PEFY-W10VMS-A	PEFY-W15VMS-A	PEFY-W20VMS-A	PEFY-W25VMS-A
Power source			1-phase 220-240 V 50 Hz	1-phase 220-240 V 50 Hz	1-phase 220-240 V 50Hz	1-phase 220-240 V 50Hz
Cooling capacity*1		kW	1.2	1.7	2.2	2.8
		BTU/h	4,100	5,800	7,500	9,600
Heating capacity*1		kW	1.4	1.9	2.5	3.2
		kcal/h	1,200	1,600	2,200	2,800
		BTU/h	4,800	6,500	8,500	10,900
Power input	Cooling	kW	0.020	0.025	0.030	0.035
	Heating	kW	0.020	0.025	0.030	0.035
External finish			Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	Galvanized steel plate
External dimension		HxWxD	200 x 790 x 700	200 x 790 x 700	200 x 790 x 700	200 x 790 x 700
Net weight		kg	19 (42)	19 (42)	19 (42)	19 (42)
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2
	External static press.*2	Pa	<5> - 15 - <35> - <50>	<5> - 15 - <35> - <50>	<5> - 15 - <35> - <50>	<5> - 15 - <35> - <50>
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Bassa –Media- Alta)
		m3/min	4.0 - 4.5 - 5.0	5.0 - 5.5 - 7.0	5.5 - 6.5 - 7.5	5.5 - 6.5 - 8.5
Motor	Type		Motore DC	Motor DC	Motor DC	Motor DC
	Output	kW	0.096	0.096	0.096	0.096
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	20-22-23	22-24-25	23-24-26	23-24-28
Air filter			PP honeycomb fabric	PP honeycomb fabric	PP honeycomb fabric	PP honeycomb fabric
Water piping diameter	Inlet	mm I.D.	20	20	20	20
	Outlet	mm I.D.	20	20	20	20
Field drain pipe size		mm	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.

*2 The external static pressure is factory set to 15 Pa for the PEFY-W VMS-A model
The HVRF **W** indoor units can be connected to both **HVRF Y** and **R2** systems.

Technical specifications

MODEL			PEFY-W32VMS-A	PEFY-W40VMS-A	PEFY-W50VMS-A
Power source			1-phase 220-240 V 50 Hz	1-phase 220-240 V 50 Hz	1-phase 220-240 V 50Hz
Cooling capacity*1		kW	3.6	4.5	5.6
		BTU/h	12,300	15,400	19,100
Heating capacity*1		kW	4.0	5.0	6.3
		kcal/h	3,400	4,300	5,400
		BTU/h	13,600	17,100	21,500
Power input	Cooling	kW	0.040	0.045	0.070
	Heating	kW	0.040	0.045	0.070
External finish			Galvanized steel plate	Galvanized steel plate	Galvanized steel plate
External dimension		HxWxD	200 x 790 x 700	200 x 990 x 700	200 x 990 x 700
Net weight		kg	19.5 (45)	23.5 (53)	23.5 (53)
Heat exchanger			Cross fin (Aluminum fin and copper tube)		
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 3	Sirocco fan x 3
	External static press.*2	Pa	<5> - 15 - <35> - <50>	<5> - 15 - <35> - <50>	<5> - 15 - <35> - <50>
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	5.5 - 6.5 - 9.0	8.0 - 9.5 - 11.0	9.5 - 12.0 - 14.5
Motor	Type		Motor DC	Motor DC	Motor DC
	Output	kW	0.096	0.096	0.096
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	24-25-31	24-25-28	25-29-33
Air filter			PP honeycomb fabric	PP honeycomb fabric	PP honeycomb fabric
Water piping diameter	Inlet	mm I.D.	20	20	20
	Outlet	mm I.D.	20	20	20
Field drain pipe size		mm	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.
*2 The external static pressure is factory set to 15 Pa for the PEFY-W VMS-A model
The HVRF **W** indoor units can be connected to both **HVRF Y** and **R2** systems.

Indoor unit	Connectivity with outdoor unit
W Model	R2 + HBC Series Y Series + Idronic Unit

The table below summarizes the connectivity between different combinations of indoor units for HVRF - R2 systems

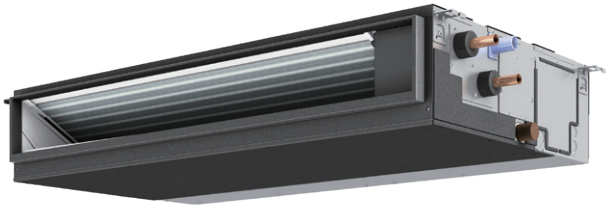
HVRF-R2 outdoor unit	Indoor unit			Connectivity
	A	B	C	
	WLV	W	-	Connectible
	WLV	WL	W	Not connectible
	WLV	W	WP	Not connectible
	WL	W	-	Not connectible
	WL	WP	W	Not connectible
	W	WP	-	Not connectible

In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve.
The valve kit is required to use the HVRF-Y system.

WLV =Indor Unit Type WL with optional valve kit
WL = Indor Unit Type WL without optional valve kit
WP = Indoor Unit Type WP (without integrated valve and not compatible with the optional valve kit)
W = Indoor Unit Type W (With integrated valve)

PEFY-W VMA-A

INDOOR UNITS - Ceiling concealed medium to high static pressure



VALVE **INCLUDED**

Technical specifications

MODEL			PEFY-W20VMA-A	PEFY-W25VMA-A	PEFY-W32VMA-A	PEFY-W40VMA-A	PEFY-W50VMA-A
Power source			1-phase 220-240 V 50 Hz	1-phase 220-240 V 50 Hz	1-phase 220-240 V 50Hz	1-phase 220-240 V 50Hz	1-phase 220-240 V 50Hz
Cooling capacity*1		kW	2.2	2.8	3.6	4.5	5.6
		BTU/h	7,500	9,600	12,300	15,400	19,100
Heating capacity*1		kW	2.5	3.2	4.0	5.0	6.3
		kcal/h					
		BTU/h	8,500	10,900	13,600	17,100	21,500
Power input	Cooling	kW	0.032	0.032	0.044	0.047	0.093
	Heating	kW	0.030	0.030	0.042	0.045	0.091
External finish			Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	Galvanized steel plate
External dimension		HxWxD	250 x 700 x 732			250 x 900 x 732	250 x 1,100 x 732
Net weight		kg	22 (49)	22 (49)	22 (49)	26 (58)	30 (67)
Heat exchanger			Cross fin (Aluminum fin and copper tube)				
FAN	Type x Quantity		Sirocco fan x 1	Sirocco fan x 1	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2
	External static press.*2	Pa	35 - <50> - <70> - <100> - <150>				40 - <50> - <70> - <100> - <150>
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	6.0 - 7.5 - 8.5	6.0 - 7.5 - 8.5	7.5 - 9.0 - 10.5	10.0 - 12.0 - 14.0	14.5 - 18.0 - 21.0
Motor	Type		Motor DC	Motor DC	Motor DC	Motor DC	Motor DC
	Output	kW	0.085	0.085	0.085	0.121	0.121
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	21-25-27	21-25-27	23-27-30	23-28-31	26-31-35
Air filter			PP honeycomb fabric				
Water piping diameter	Inlet	mm I.D.	20	20	20	20	20
	Outlet	mm I.D.	20	20	20	20	20
Field drain pipe size		mm	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.

*2 The external static pressure is factory set to 15 Pa for the PEFY-W VMA-A model.
The HVRF **W** indoor units can be connected to both **HVRF Y** and **R2** systems.

Technical specifications

MODEL			PEFY-W63VMA-A	PEFY-W71VMA-A	PEFY-W80VMA-A	PEFY-W100VMA-A	PEFY-W125VMA-A
Power source			1-phase 220-240 V 50 Hz	1-phase 220-240 V 50 Hz	1-phase 220-240 V 50Hz	1-phase 220-240 V 50Hz	1-phase 220-240 V 50Hz
Cooling capacity*1		kW		8.0	9.0	11.2	14.0
		BTU/h	24,200	27,300	30,700	38,200	47,800
Heating capacity*1		kW	8.0	9.0	10.0	12.5	16.0
		kcal/h					
		BTU/h	27,300	30,700	34,100	42,700	54,600
Power input	Cooling	kW	0.093	0.093	0.093	0.142	0.199
	Heating	kW	0.091	0.091	0.091	0.140	0.197
External finish			Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	Lamiera in acciaio galvanizzato
External dimension		HxWxD	250 x 1,100 x 732			250 x 1,400 x 732	
Net weight		kg	30 (67)	30 (67)	30 (67)	37 (82)	38 (84)
Heat exchanger			Cross fin (Aluminum fin and copper tube)				
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 3	Sirocco fan x 3	Sirocco fan x 3
	External static press.*2	Pa	40 - <50> - <70> - <100> - <150>				<40> - 50 - <70> - <100> - <150>
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0	23.0 - 28.0 - 32.0	28.0 - 34.0 - 37.0
Motor	Type		Motore DC	Motore DC	Motore DC	Motore DC	Motore DC
	Output	kW	0.121	0.121	0.121	0.300	0.300
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	26-31-35	26-31-35	26-31-35	30-35-38	34-38-40
Air filter			PP honeycomb fabric				
Water piping diameter	Inlet	mm I.D.	30	30	30	30	30
	Outlet	mm I.D.	30	30	30	30	30
Field drain pipe size		mm	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.
*2 The external static pressure is factory set to 15 Pa for the PEFY-W VMA-A model.
The HVRF **W** indoor units can be connected to both **HVRF Y** and **R2** systems.

Indoor unit	Connectivity with outdoor unit
W Model	R2 + HBC Series Y Series + Idronic Unit

The table below summarizes the connectivity between different combinations of indoor units for HVRF - R2 systems

HVRF-R2 outdoor unit	Indoor unit			Connectivity
	A	B	C	
	WLV	W	-	Connectible
	WLV	WL	W	Not connectible
	WLV	W	WP	Not connectible
	WL	W	-	Not connectible
	WL	WP	W	Not connectible
	W	WP	-	Not connectible

In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve.
The valve kit is required to use the HVRF-Y system.

WLV =Indor Unit Type WL with optional valve kit
WL = Indor Unit Type WL without optional valve kit
WP = Indoor Unit Type WP (without integrated valve and not compatible with the optional valve kit)
W = Indoor Unit Type W (With integrated valve)

PLFY-WL VEM-E

INDOOR UNITS - 4-way cassette 900x900

VALVE
EXCLUDED

Technical specifications

MODEL			PLFY-WL32VEM-E	PLFY-WL40VEM-E	PLFY-WL50VEM-E
Power source			1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz
Cooling capacity*1		kW	3.6	4.5	5.6
		BTU/h	12,300	15,400	19,100
Heating capacity*1		kW	4.0	5.0	6.3
		kcal/h	3,400	4,300	5,400
		BTU/h	13,600	17,100	21,500
Power input	Cooling	kW	0.03	0.03	0.04
	Heating	kW	0.03	0.03	0.04
External finish			Galvanized steel plate	Galvanized steel plate	Galvanized steel plate
External dimension		HxWxD	258 × 840 × 840	258 × 840 × 840	258 × 840 × 840
Net weight		kg	20 (44)	20 (44)	20 (44)
Heat exchanger			Cross fin (Al fin and Cu pipe)		
FAN	Type x Quantity		Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
	External static press.*2	Pa	-	-	-
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	14-15-16-17	14-15-16-17	14-16-18-20
Motor	Type		Motor DC		
	Output	kW	0.050	0.050	0.050
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	26-27-29-30	26-28-29-31	27-29-31-33
Air filter			PP honeycomb fabric		
Water piping diameter	Inlet	mm I.D.	20	20	20
	Outlet	mm I.D.	20	20	20
Field drain pipe size		mm	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.
The HVRF **WL** indoor units can be connected to both **HVRF Y** and **R2** systems.

Indoor unit	Connectivity with outdoor unit
WL Model	R2 + HBC Series Y Series + Idronic Unit

Valve kit specifications

Model			PAC-SK35VK-E
Dimensions	H × W × D	mm	549 × 201 × 107
Net weight	kg	kg	3.5
Water piping diameter	Inlet	mm I.D.	20
	Outlet	mm I.D.	20

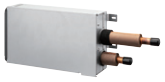
*PAC-SK04VK-E phase-out after stock end

The table below summarizes the connectivity between different combinations of indoor units for HVRF - R2 systems

HVRF-R2 outdoor unit	Indoor unit			Connectivity
	A	B	C	
	WLV	WLV	-	Connectible
	WLV	W	-	Connectible
	WLV	WL	-	Not connectible
	WLV	WP	-	Not connectible
	WLV	WL	W	Not connectible
	WLV	WL	WP	Not connectible
	WLV	W	WP	Not connectible
	WL	WL	-	Connectible
	WL	WP	-	Connectible
	WL	W	-	Not connectible
	WL	WP	W	Not connectible

In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve.
The valve kit is required to use the HVRF-Y system.

WLV =Indor Unit Type WL with optional valve kit
WL = Indor Unit Type WL without optional valve kit
WP = Indoor Unit Type WP (without integrated valve and not compatible with the optional valve kit)
W = Indoor Unit Type W (With integrated valve)



PLFY-WL VFM-E

INDOOR UNITS - 4-way cassette 600x600

VALVE
EXCLUDED

Technical specifications

MODEL			PLFY-WL10VFM-E	PLFY-WL15VFM-E	PLFY-WL20VFM-E	PLFY-WL25VFM-E	PLFY-WL32VFM-E
Power source			1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz
Cooling capacity*1		kW	1.2	1.7	2.2	2.8	3.6
		BTU/h	4,100	5,800	7,500	9,600	12,300
Heating capacity*1		kW	1.4	1.9	2.5	3.2	4.0
		kcal/h	1,200	1,600	2,200	2,800	3,400
		BTU/h	4,800	6,500	8,500	10,900	13,600
Power input	Cooling	kW	0.02	0.02	0.02	0.03	0.04
	Heating	kW	0.02	0.02	0.02	0.03	0.04
External finish			Galvanized steel plate				
External dimension		HxWxD	208 × 570 × 570				
Net weight		kg	13 (29)	13 (29)	14 (31)	14 (31)	14 (31)
Heat exchanger			Cross fin (Al fin and Cu pipe)				
FAN	Type x Quantity		Turbo fan × 1	Turbo fan × 1	Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
	External static press.*2	Pa	-	-	-	-	-
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	6.0-6.5-7.0	6.0-7.0-8.0	6.5-7.0-8.0	6.5-7.5-9.0	6.5-9.0-12.0
Motor	Type		Motore DC	Motore DC	Motore DC	Motore DC	Motore DC
	Output	kW	0.050	0.050	0.050	0.050	0.050
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	25-26-27	25-26-29	27-29-31	27-30-34	27-33-41
Air filter			PP honeycomb fabric				
Water piping diameter	Inlet	mm I.D.	20	20	20	20	20
	Outlet	mm I.D.	20	20	20	20	20
Field drain pipe size		mm	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.
The HVRF **WL** indoor units can be connected to both **HVRF Y** and **R2** systems.

Indoor unit	Connectivity with outdoor unit
WL Model	R2 + HBC Series Y Series + Idronic Unit

Valve kit specifications

Model			PAC-SK35VK-E
Dimensions	H × W × D	mm	549 × 201 × 107
Net weight	kg	kg	3.5
Water piping diameter	Inlet	mm I.D.	20
	Outlet	mm I.D.	20

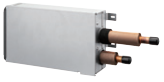
*PAC-SK04VK-E phase-out after stock end

The table below summarizes the connectivity between different combinations of indoor units for HVRF - R2 systems

HVRF-R2 outdoor unit	Indoor unit			Connectivity
	A	B	C	
	WLV	WLV	-	Connectible
	WLV	W	-	Connectible
	WLV	WL	-	Not connectible
	WLV	WP	-	Not connectible
	WLV	WL	W	Not connectible
	WLV	WL	WP	Not connectible
	WLV	W	WP	Not connectible
	WL	WL	-	Connectible
	WL	WP	-	Connectible
	WL	W	-	Not connectible
	WL	WP	W	Not connectible

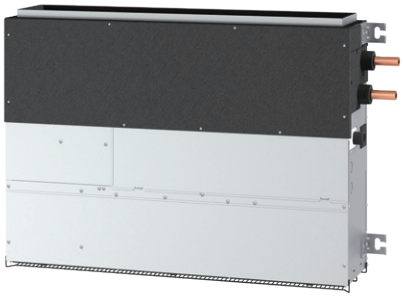
In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve.
The valve kit is required to use the HVRF-Y system.

WLV =Indor Unit Type WL with optional valve kit
WL = Indor Unit Type WL without optional valve kit
WP = Indoor Unit Type WP (without integrated valve and not compatible with the optional valve kit)
W = Indoor Unit Type W (With integrated valve)



PFFY-W VCM-A

INDOOR UNITS - Floor standing concealed



VALVE **INCLUDED**

Technical specifications

MODEL			PFFY-W20VCM-A	PFFY-W25VCM-A	PFFY-W32VCM-A	PFFY-W40VCM-A	PFFY-W50VCM-A
Power source			1-phase 220-240 V 50 Hz	1-phase 220-240 V 50 Hz	1-phase 220-240 V 50Hz	1-phase 220-240 V 50 Hz	1-phase 220-240 V 50 Hz
Cooling capacity*1		kW	2.2	2.8	3.6	4.5	5.6
		BTU/h	7,500	9,600	12,300	15,400	19,100
Heating capacity*1		kW	2.5	3.2	4.0	5.0	6.3
		kcal/h	2,200	2,800	3,400	4,300	5,400
		BTU/h	8,500	10,900	13,600	17,100	21,500
Power input	Cooling	kW	0.022	0.029	0.035	0.038	0.062
	Heating	kW	0.022	0.029	0.035	0.038	0.062
External finish			Galvanized steel plate				
External dimension		HxWxD	615 (690) x 700 x 200	615 (690) x 700 x 200	615 (690) x 700 x 200	615 (690) x 900 x 200	615 (690) x 900 x 200
Net weight		kg	18.5 (42)	18.5 (42)	19 (42)	23 (51)	23 (51)
Heat exchanger			Cross fin (Al fin and Cu pipe)				
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 3	Sirocco fan x 3
	External static press.*2	Pa	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	5.0 - 6.0 - 7.0	5.5 - 7.0 - 8.5	6.5 - 7.5 - 9.0	8.0 - 9.5 - 11.0	10.5 - 12.5 - 14.5
Motor	Type		Motor DC				
	Output	kW	0.096	0.096	0.096	0.096	0.096
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	21-23-26	22-26-30	25-28-32	25-27-30	28-32-35
Air filter			PP honeycomb fabric				
Water piping diameter	Inlet	mm I.D.	20	20	20	20	20
	Outlet	mm I.D.	20	20	20	20	20
Field drain pipe size		mm	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.

*2 The external static pressure is factory set to 20 Pa for the PFFY-WP VLRMM-E Model.
The HVRF **W** indoor units can be connected to both **HVRF Y** and **R2** systems.
Indoor unit connections 3/4" thread.

Indoor unit	Connectivity with outdoor unit
W Model	R2 + HBC Series Y Series + Idronic Unit

The table below summarizes the connectivity between different combinations of indoor units for HVRF - R2 systems

HVRF-R2 outdoor unit	Indoor unit			Connectivity
	A	B	C	
	WLV	W	-	Connectible
	WLV	WL	W	Not connectible
	WLV	W	WP	Not connectible
	WL	W	-	Not connectible
	WL	WP	W	Not connectible
	W	WP	-	Not connectible

In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve.
The valve kit is required to use the HVRF-Y system.

WLV =Indor Unit Type WL with optional valve kit
WL = Indor Unit Type WL without optional valve kit
WP = Indoor Unit Type WP (without integrated valve and not compatible with the optional valve kit)
W = Indoor Unit Type W (With integrated valve)

PKFY-WL VLM-E

INDOOR UNITS - Wall-mounted

VALVE
EXCLUDED

Technical specifications

MODEL			PKFY-WL10VLM-E	PKFY-WL15VLM-E	PKFY-WL20VLM-E
Power source			1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz
Cooling capacity*1		kW	1.2	1.7	2.2
		BTU/h	4,100	5,800	7,500
Heating capacity*1		kW	1.4	1.9	2.5
		kcal/h	1,200	1,600	2,200
		BTU/h	4,800	6,500	8,500
Power input	Cooling	kW	0.02	0.02	0.03
	Heating	kW	0.01	0.01	0.02
External finish			Galvanized steel plate		
External dimension		HxWxD	299 × 773 × 237		
Net weight		kg	11(25)	11(25)	11(25)
Heat exchanger			Cross fin (Al fin and Cu pipe)		
FAN	Type x Quantity		Line flow fan x 1	Line flow fan x 1	Line flow fan x 1
	External static press.*2	Pa	-	-	-
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	3.3 - 3.8 - 4.1 - 4.5	3.3 - 3.8 - 4.3 - 4.9	4.0 - 5.0 - 6.0 - 7.0
Motor	Type		Motor DC		
	Output	kW	0.030	0.030	0.030
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	22-26-28-30	22-26-29-32	22-28-33-36
Air filter			PP honeycomb fabric		
Water piping diameter	Inlet	mm I.D.	Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw
	Outlet	mm I.D.	Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw
Field drain pipe size		mm	I.D.16 (5/8)	I.D.16 (5/8)	I.D.16 (5/8)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.
The HVRF **WL** indoor units can be connected to both **HVRF Y** and **R2** systems.

Technical specifications

MODEL			PKFY-WL25VLM-E	PKFY-WL32VLM-E	PKFY-WL40VLM-E
Power source			1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz	1-phase 220-240 V 50 Hz, 1-phase 220 V 60 Hz
Cooling capacity*1		kW	2.8	3.6	4.5
		BTU/h	9,600	12,300	15,400
Heating capacity*1		kW	3.2	4.0	5.0
		kcal/h	2,800	3,400	4,300
		BTU/h	10,900	13,600	17,100
Power input	Cooling	kW	0.04	0.04	0.05
	Heating	kW	0.03	0.03	0.04
External finish			Galvanized steel plate		
External dimension		HxWxD	299 × 773 × 237	299 × 898 × 237	
Net weight		kg	11(25)	13(29)	13(29)
Heat exchanger			Cross fin (Al fin and Cu pipe)		
FAN	Type x Quantity		Line flow fan x 1	Line flow fan x 1	Line flow fan x 1
	External static press.*2	Pa	-	-	-
	Air flow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m3/min	3.3 - 3.8 - 4.1 - 4.5	6.3 - 7.6 - 9.0 - 10.4	6.4 - 8.2 - 10.0 - 11.9
Motor	Type		Motor DC		
	Output	kW	0.030	0.030	0.030
Sound pressure level			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		dB <A>	22-26-28-30	29-34-38-41	30-36-41-45
Air filter			PP honeycomb fabric		
Water piping diameter	Inlet	mm I.D.	Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw
	Outlet	mm I.D.	Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw
Field drain pipe size		mm	I.D.16 (5/8)	I.D.16 (5/8)	I.D.16 (5/8)

*1 The heating/cooling capacity indicates the maximum value during operation under the following conditions:
Cooling: indoor 27°C DB / 19°C WBT, outdoor 35°C DB. Heating: indoor 20°C DB, outdoor 7°C DB. Length of pipes: 7.5 m. Height difference: 0 m.
The HVRF **WL** indoor units can be connected to both **HVRF Y** and **R2** systems.

Indoor unit	Connectivity with outdoor unit
WL Model	R2 + HBC Series Y Series + Idronic Unit

Valve kit specifications

Model			PAC-SK35VK-E
Dimensions	H × W × D	mm	549 × 201 × 107
Net weight	kg	kg	3.5
Water piping diameter	Inlet	mm I.D.	20
	Outlet	mm I.D.	20

*PAC-SK04VK-E phase-out after stock end

The table below summarizes the connectivity between different combinations of indoor units for HVRF - R2 systems

HVRF-R2 outdoor unit	Indoor unit			Connectivity
	A	B	C	
	WLV	WLV	-	Connectible
	WLV	W	-	Connectible
	WLV	WL	-	Not connectible
	WLV	WP	-	Not connectible
	WLV	WL	W	Not connectible
	WLV	WL	WP	Not connectible
	WLV	W	WP	Not connectible
	WL	WL	-	Connectible
	WL	WP	-	Connectible
	WL	W	-	Not connectible
	WL	WP	W	Not connectible

In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve.
The valve kit is required to use the HVRF-Y system.

WLV =Indor Unit Type WL with optional valve kit
WL = Indor Unit Type WL without optional valve kit
WP = Indoor Unit Type WP (without integrated valve and not compatible with the optional valve kit)
W = Indoor Unit Type W (With integrated valve)